ZAXXON™

Manual Part No.
420-0724

SEGA®/Gremlin®

ZAXXON T.M.

OWNER'S MANUAL

MANUFACTURED BY

SEGA®/Gremlin®

TLX 910-335-1621

INTRODUCTION

ZAXXON is a microprocessor based coin-operated electronic game, that makes extensive use of digital integrated circuitry and television monitor concepts. This manual is designed for the use of maintenance technicians who possess a general working knowledge of solid-state circuitry, and video monitor theory. Any individual NOT knowledgeable in these areas SHOULD NOT attempt repair of the electronic portions of the game.

In addition to this manual and training in electronics, troubleshooting and repair will be facilitated by access to general electronic-type handtools, a multimeter, a 50 or 100 Mhz oscilloscope and a logic probe would be helpful.

Technical assistance is available by calling (800) 854-1938. Questions or comments concerning ZAXXON or any of our games are welcome and should be directed to:

Technical Editor
SEGA/Gremlin
16250 Technology Drive
San Diego, California 92127

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IMPORTANT NOTES

The following note is included in compliance with FCC rules:
WARNING: This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. As temporarily permitted by regulation, it has not been tested for compliance with the limits for Class A computing devices pursuant to Subpart J of Part 15 FCC Rules, which are designed to provide reasonable protection against interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

OTHER NOTES

NEVER replace any components with anything other than exact replacement parts.
NEVER remove circuit board connections while power is on.
DO NOT replace the fuse with anything other than the proper value. A blown fuse indicates an overload condition within the game. Replacing the fuse with a higher value can cause severe damage to internal components if an overload occurs.
ALWAYS consult the manual before attempting repairs.

GAME CONCEPT

ZAXXON is a unique isometric perspective, in which you find yourself piloting an "attack-shuttle" spacecraft, strafing the enemy's "asteroid city" in an attempt to destroy fuel tanks, gun implacements, missiles, fighters and the dreaded enemy robot. With the aid of an altimeter that constantly monitors your height, you control your ship with an aircraft-style joystick, barnstorming your way through wall openings, under electronic barriers, dodging rockets, and in a later round, dueling with the insidious enemy robot. A successful attack-run across ZAXXON leads us to a deep-space dogfight with enemy planes. As you climb, turn and dive, a "cross-hair" appears on the screen to indicate exact positioning for a laser hit on incoming craft. Notice the buffeting as you fly near "proximity explosions." In addition to your altitude, a running count is displayed of your score, number of ships remaining to you, number of enemy ships remaining to be destroyed, and fuel remaining. Fuel bonuses, as well as points, are awarded for destroying fuel tanks, but your ship crashes if you run out of fuel between rounds.

After a specified number of enemy ships are destroyed, the robot appears, launching seeker-missiles. Destruction of the robot requires six direct hits on the robot's missile launcher, after which the round changes with greater difficulty. Number of player ships and bonus point levels are operator selectable. Game play ends with the loss of your last ship.

Unique and beautiful graphics combined with the challenging new perspective and fast paced game play result in what appears to be another popular and profitable investment from SEGA/Gremlin.

Scoring

Radar Tower	1000
Fuel Tanks	300
Gun Implacements	200 or 500 (random)
Base Missiles	150
Enemy Planes	100 (Increases by 50 each round)
Satellite	300
Robot Missile	200
Robot	1000

OPTIONS SELECTION

Switch 1

Game Options	1	2	3	4	5	6	7	8
Extra Ship @ 10,000	ON	ON	X	X	X	X	X	X
20,000	ON	OFF	X	X	X	X	X	X
30,000	OFF	ON	X	X	X	X	X	X
40,000	OFF	OFF	X	X	X	X	X	X
Free Ships	X	X	X	X	OFF	OFF	X	X
5 Ships	X	X	X	X	OFF	ON	X	X
4 Ships	X	X	X	X	ON	OFF	X	X
3 Ships	X	X	X	X	ON	ON	X	X
Sound On	X	X	X	X	X	X	ON	X
Sound Off	X	X	X	X	X	X	OFF	X
Upright	X	X	X	X	X	X	X	OFF
Cocktail Table	X	X	X	X	X	X	X	ON

Switch 2

Coin Options	Coin Mech B				Coin Mech A			
Coin/Credit	1	2	3	4	5	6	7	8
4 coins/1 credit	ON	ON	ON	ON	ON	ON	ON	ON
3 coins/1 credit	ON	ON	ON	OFF	ON	ON	ON	OFF
2 coins/1 credit	ON	ON	OFF	ON	ON	ON	OFF	ON
1 coin/1 credit	ON	ON	OFF	OFF	ON	ON	OFF	OFF
1 coin/2 credits	ON	OFF	ON	ON	ON	OFF	ON	ON
1 coin/3 credits	ON	OFF	ON	OFF	ON	OFF	ON	OFF
1 coin/4 credits	ON	OFF	OFF	ON	ON	OFF	OFF	ON
1 coin/5 credits	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF

Switch 2-Continued

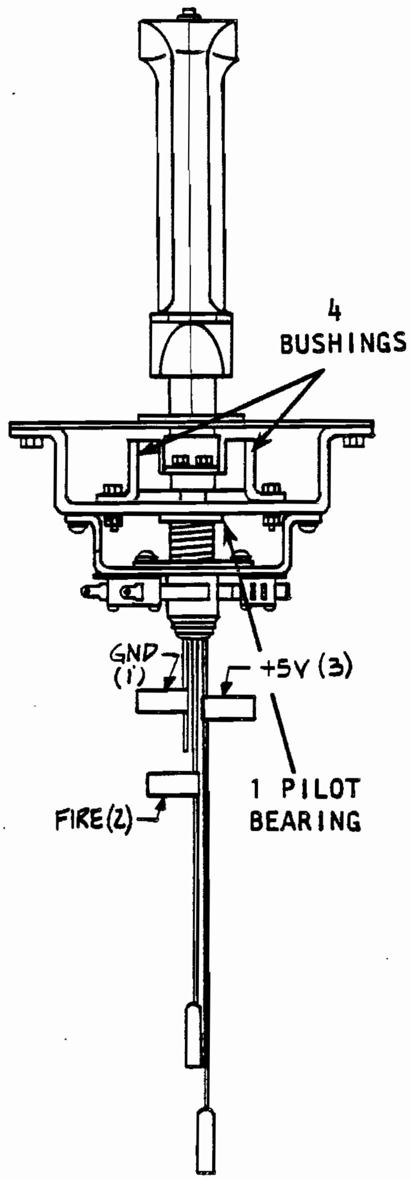
Coin Options	Coin Mech B				Coin Mech A			
Coin/Credit	1	2	3	4	5	6	7	8
1 coin/6 credits	OFF	ON	ON	ON	OFF	ON	ON	ON
2 coins/1 credit	OFF	ON	ON	OFF	OFF	ON	ON	OFF
4 coins/2 credits								
5 coins/3 credits								
6 coins/4 credits								
2 coins/1 credit	OFF	ON	OFF	ON	OFF	ON	OFF	ON
4 coins/3 credits								
1 coin/1 credit	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF
2 coins/2 credits								
3 coins/3 credits								
4 coins/4 credits								
5 coins/6 credits								
1 coin/1 credit	OFF	OFF	ON	ON	OFF	OFF	ON	ON
2 coins/2 credits								
3 coins/3 credits								
4 coins/5 credits								
1 coin/1 credit	OFF	OFF	ON	OFF	OFF	OFF	ON	OFF
2 coins/3 credits								
1 coin/2 credits	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON
2 coins/4 credits								
3 coins/6 credits								
4 coins/8 credits								
5 coins/11 credits								

Switch 2-Continued

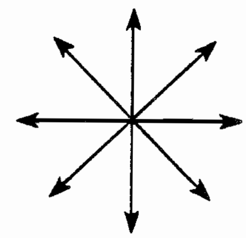
Coin Options	Coin Mech B				Coin Mech A			
Coin/Credit	1	2	3	4	5	6	7	8
1 coin/2 credits	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2 coins/4 credits								
3 coins/6 credits								
4 coins/9 credits								

ZAXXON™ Joystick

Maintenance Specifications



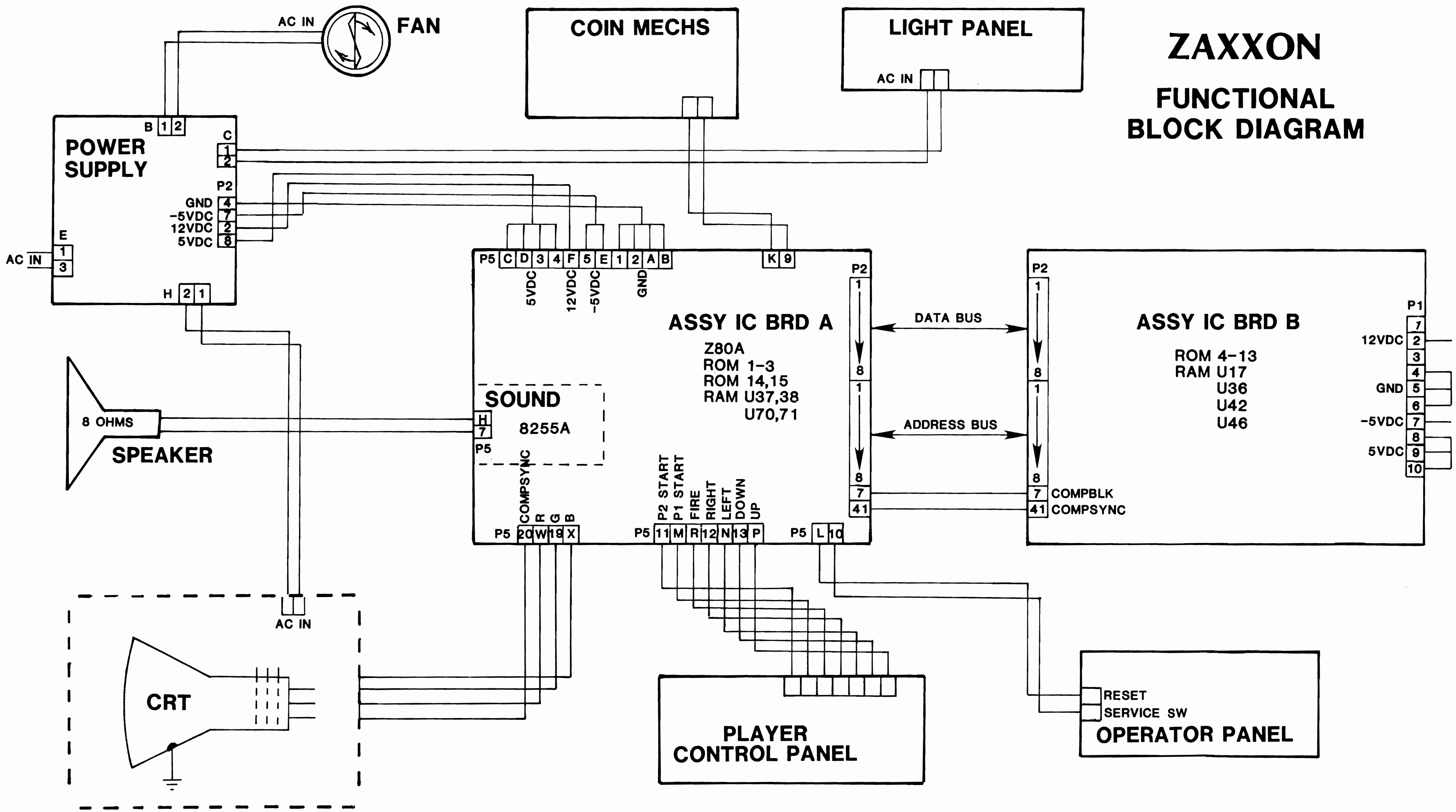
1. The 834-0236 Assy is an eight-way joystick handle, trigger and LED Fire indicator.
2. "Eight-way" is a reference to the fact that any two (of four total) adjacent microswitches may be closed simultaneously (i.e., Up/Right, Down/Left), for eight possible combinations.



3. Electrical verification of both Up/Down/Right/Left, and Fire input information is available in the Self-Test sequence, Step 6.
4. At 6 month intervals, lubrication of those spots indicated by an arrow, is recommended. Most silicon-based lubricants are suitable, although caution should be exercised not to over-use <u>any</u> lubricant.
5. During disassembly, please note those fasteners that are "locked" with silicon-rubber adhesive. Vibration and hard use of thse joysticks makes conscientious reuse of an adhesive worthwhile.
6. Should it become necessary to replace the LED, wire routing, use of shrink-tube, and staggering of connector pins MUST be faithfully reproduced, both to ease mechanical fitting, and to avoid failures resulting from chafe.

7. All joystick assemblies, manufactured after 4/26/82, contain new tamper-proof screws, which require special wrenches to remove. Refer to the parts list for screw locations. Wrenches are available either from Gremlin or from Qualtoll, Inc., 1020 Burnell Road, Mastland, FL 32751, (305) 834-5800. Listed below are the Gremlin part numbers for the screws and associated wrenches and also the Qualtoll part numbers for the wrenches:

Gremlin Part Number		Gremlin Part Number		Qualtoll Part Number	
Screw	111-1050	Wrench	540-0006	Wrench	69-T-20
Screw	111-1051	Wrench	540-0007	Wrench	69-T-25


ZAXXON
FUNCTIONAL BLOCK DIAGRAM
FAN
AC IN
COIN MECHS
LIGHT PANEL
POWER SUPPLY
B 1 2
C 1 2
P2
GND 4
-5VDC 7
12VDC 2
5VDC 8
E 1 3
H 2 1
P5 C D 3 4 F 5 E 1 2 A B K 9
5VDC
12VDC
-5VDC
GND
ASSY IC BRD A
Z80A
ROM 1-3
ROM 14,15
RAM U37,38
U70,71
SOUND
8255A
H 7 P5
8 OHMS
SPEAKER
DATA BUS
ADDRESS BUS
ASSY IC BRD B
ROM 4-13
RAM U17
U36
U42
U46
P1
12VDC
GND
-5VDC
5VDC
COMPBLK
COMPSYNC
COMPSYNC R G B
P5 20 W 19 X
P2 START P1 START FIRE RIGHT LEFT DOWN UP
P5 11 M R 12 N 13 P
P5 L 10
CRT
PLAYER CONTROL PANEL
RESET
SERVICE SW
OPERATOR PANEL

ZAXXON™ CIRCUIT DESCRIPTION

ZAXXON is a microprocessor based, digital-integrated circuit computer video game. The heart of the computer is the CPU (U24), a Z80A located on the 834-0214 Assy IC Board A. The Alpha type chip MUST ALWAYS be used, as the Z80 is not fast enough to run the programs.

Master timing is crystal-driven at 48.66 MHz, (X1, Zone 6-D, Sht. 7, Assy. IC Bd. B, 834-0211) through Q1, Q2, T1, U19, U38, U41, and frequency dividers U1, U2, and U21. CPU timing (1H) is taken from U1 p-14, through U45, U9, applied to Bus Driver U94 p-6 (Zone 8-D, Sht. 8, Assy. IC Bd. B, 834-0211), through P3 p-9 to the "A"Board (Zone 1-A, Sht. 14, Assy. IC Bd, A, 834-0214) is referenced by U25 and Q14 (Zone 8-D, Sht. 14, Assy. IC Bd, A, 834-0214) and finally applied to pin-6 of the CPU (U24). Back at U45 (Zone 4-A, Sht. 7, Assy. IC Bd. B, 834-0211) the $\overline{1H}$ pulse is used to clock the Octal Flip-Flops U16 and U25 (Sht. 6, 834-0211).

Manual system reset comes from the operator panel through P5 p-L, appears as a LO at U53 p-1 (Zone 4-D, Sht. 13, Assy. IC Bd. A, 834-0214) and is then felt at pin-26 of the CPU (Zone 8-C, Sht. 14, 834-0214). Normal program interrupts (INT) are felt at pin-16 of the Z80A (an edge-triggered LO), and are the result of Input/Output activity times with vertical blanking (an approx. 2 msec. instruction interrupt). The WAIT signal is used to synchronize that I/O activity during an interrupt to the CPU. U33 (Zone 6-D, Sht. 14, Assy. IC Bd. A) is an address bus controller. Three of the sixteen address lines pass through U33 and subsequently drive the Chip Enable inputs of ROMs 1, 2, and 3 (U27, U28, and U29), and RAMs U37 and U38. U81, U82, U86, U87, and U88 (Sht. 13, Assy. IC Bd. A, 834-0214) are input ports on the data

bus. Connector P5 supplies player input information, CPU reset, service switch, game start and coinage to the input ports. U101, U66, U84, and U51 input COIN B, and U101, U65, U84, and U89 input COIN A, together with Player 1 and 2 start, to data bus buffer U88. U82 accesses/buffers Player 1 and 2 Left/Right data, U81 buffers Player 1 and 2 Up/Down data, U86 buffers Player 1 and 2 fire data, and U87 serves for Option Selection data. SW3 is the self-test switch. When closed, it applies a LO to pin-17 ($\overline{NMI}$) of the Z80A, initiating a systems/function verification as follows:

ZAXXON Self-Test

1. ROM Test
2. Work RAM Test

Both results are displayed simultaneously.

ROM TEST

ROM 1 OK or NG

ROM 2 OK or NG

ROM 3 OK or NG

RAM TEST

RAM 1 OK or NG

RAM 2 OK or NG

- The ROM Test sum-check is made for the 3K bytes which contain a part of this test program, out of 4K bytes in ROM 1 (2532), and for ROM 2 and 3 (2564). The sum-check adds each byte of each ROM, retains only the last 16 bits (hexadecimal 4 digits), and compares this value with the value stored in ROM 1.
- The Work RAM Test is made for two Work RAMs (2K bytes each). Each RAM is loaded with the hexidecimal "55", reads 1 byte at

a time, and checks if it is a hexadecimal "55", repeating this process with the hexadecimal "A". This test is made to check interference between adjacent bits.

* - Press the PLAYER 1 START BUTTON to advance the test step.

3. Scroll Screen Test

* 1) no display

* 2) enemy base entrance wall in the 2nd pattern (7 bricks high)

* 3) between the 1st wall and 2nd wall (3 bricks high)

* 4) between the 2nd wall and 3rd wall (5 bricks high)

* 5) between the 3rd wall and 4th wall (1 brick high)

* 6) between the 4th wall and 5th wall (3 bricks high)

* 7) behind the 5th wall

* 8) hexagonal pattern floor

* 9) space background: 1 large star

* 10) space background: 2 large stars

* 11) enemy base entrance wall in the 1st pattern (7 bricks high)

* 12) behind the 1st wall: tanks and pipe lines

* 13) wall in half-way (1 brick high): 5 pipe lines are seen

* 14) pipe lines are seen with tanks overhead

* 15) runway entrance

* 16) middle of runway

* 17) end of runway

* 18) exit wall in the 1st pattern

* 19) space with no star: end of base can be seen at the left

4. Target Pattern Test

1) Player ship - 12

Bullet - 4

* Enemy Ship - 8

2) Ship-1, Rocket-2, Missile-2

Target-1, Explosion-2, Barrier-1

Wall-2, Artillery-1, Tank-1

Radar-1, Enemy Ship-1, Bullet-1

* Wreck-1, Explosion-6

3) Explosion-4, Satellite-1, Building-8

* Score-3 (200, 500, 1000)

5. Video RAM and Object (Target) RAM Test

VRAM TEST

VRAM OK or NG

ORAM TEST

* ORAM OK or NG

- This test is made for the VRAM character pattern display, and the ORAM target pattern display. The check method is the same as described in step 2.

6. Input Switch Test

- Press each of the specified switches in the order displayed. OK is displayed if the switch is operating normally.

INPUT TEST

MAIN (Player 1 input ports)

RG

LF

UP

DN

FR

SUB (Player 2 input ports)

RG

LF

UP

DN

FR

1P

2P

CA

CB

* SV

7. Software Output Port Test

- Tests if signals are sent from the software to the hardware.

OUTPUT TEST

CAEN

CBEN

SVEN

* CNTA

* CNTB

* REVERSE (180° flip is displayed)

* RETURN (displays FLIP IS OK)

- Enables are automatically checked at the falling edge of the input signal.

8. DIP Switch Test

- Tests the connection between the DIP switches and the software. Test the two DIP switches both with every other bit on, then test by reversing ON and OFF. Thus interference between adjacent bits can be checked at the same time.

TEST 1

* TEST 2

9. Character Pattern Test

- Displays the character patterns and picture patterns in the same ROM.
- Letters, numbers, and patterns like A to Z, 0 to 9, and  are displayed.
- * Changes color.

10. Color Reference Test

- For character patterns and background pictures, check that the color reference changes each time the Player 1 Start button is pressed.

*

11. Sound Port Test

- Verify that sound is emitted each time the * button is pressed.
- Bit 1, 2, 3, 9, 10, 11, 12, 15, 18, 21, 22, 23, and 24 does not emit sound.

* 1) flying sounds [tone changes in 1)-5)].
* 2) flying sounds
* 3) flying sounds
* 4) flying sounds
* 5) flying sounds
* 6) no sound [reset]
* 7) homing missile
* 8) missile firing
* 9) barrier
* 10) robot
* 11) explosion [small]
* 12) explosion [large]

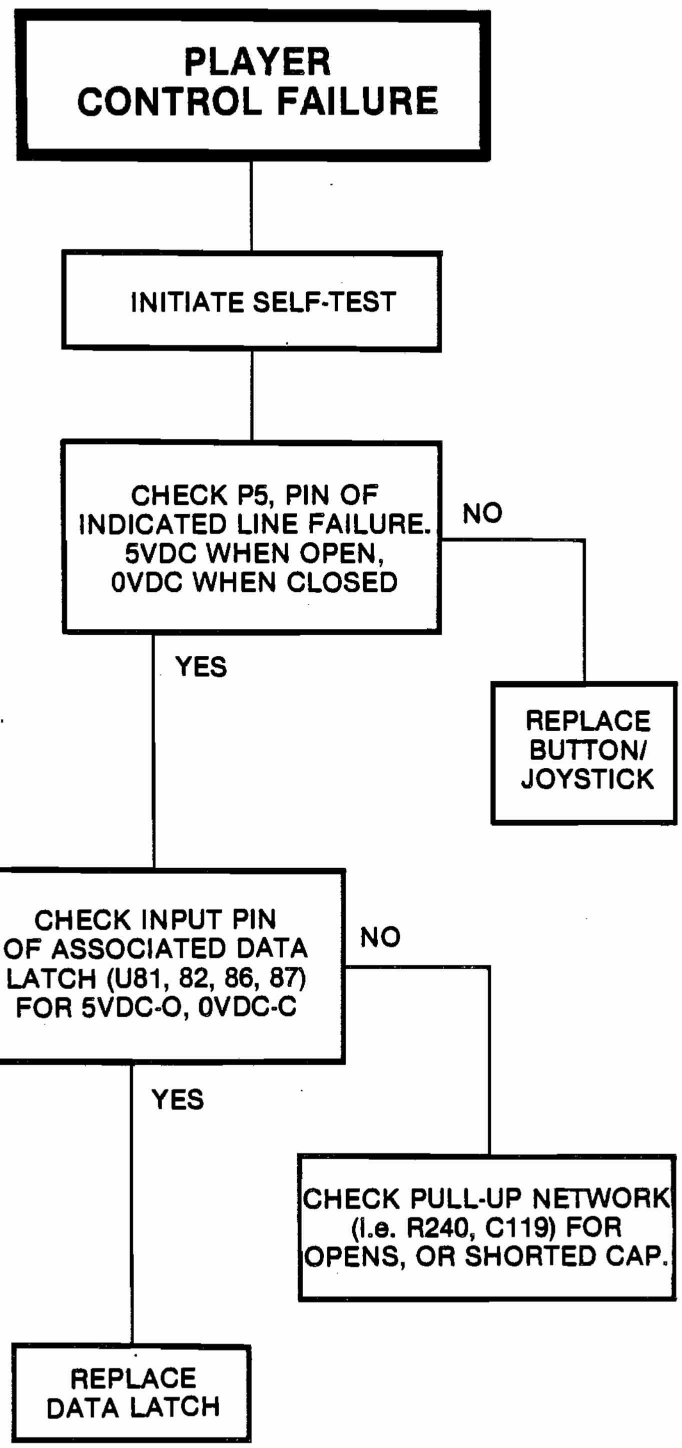
* 13) firing
* 14) firing [enemy]
* 15) target
* 16) fuel
* SELF-TEST END

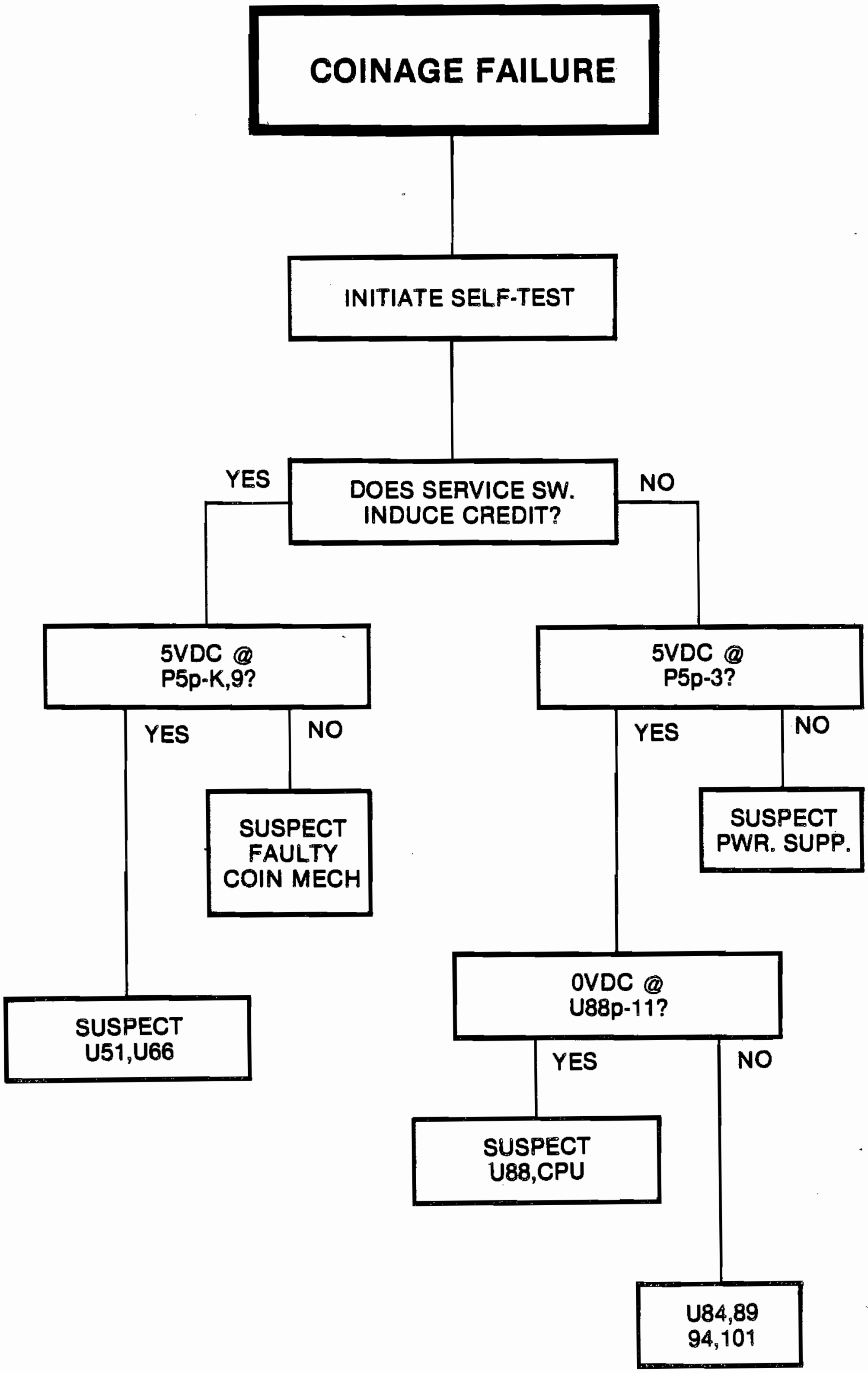
Due to the striking isometric perspective used in ZAXXON, memory requirements for background generation are significant. On Assy IC Board B (834-0211), EPROM's 4-15 contain a total of 672K bits of video character, positioning, color, and timing information. Background generation accessible memory is provided by TTL Isoplaner RAMs U42, U64 (Zone 6-B, Sht. 8, Assy. 1C Bd. B), and U46 (Zone 2-D, Sht. 6, Assy. 1C Bd. B), in addition to the 1024 x 4 bit RAMs U17 and U36. Composite synchronization is taken from pin-4 of U11 (Zone 2-C, Sht. 7, Bd. B) applied to pin-5 of U93 (Zone 7-A, Sht. 13, Assy. 1C Bd. A), selectably polarized by switch SW4 and put on pin-20 of P5, for input to the monitor, in addition to W, 19, and X. 180° video FLIP for cocktail models is latched into the data bus by SW1 position 8 through U87 (Zone 3-B, Sht. 13, Assy. 1C Bd. A).

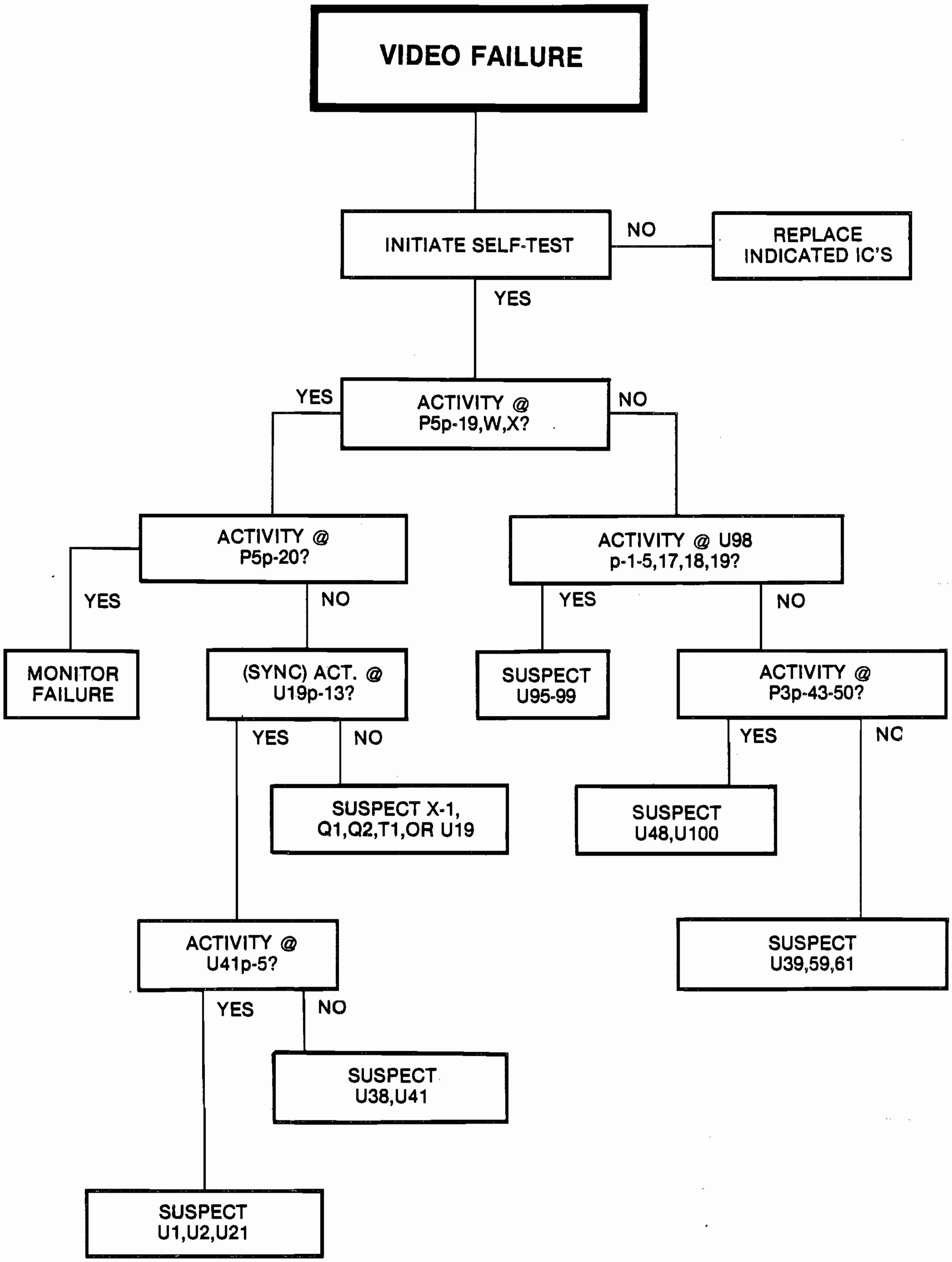
Just as the microprocessor Z80A is the heart of the game computer, so too is the 8255AC-5 (U23, Zone 8-C. Sht. 12, Assy. 1C Bd. A) the center of activity in the Sound area. Called a Sound Generator, U23 interfaces data and address bus, enabling specific sound processing circuits. These circuits consist of individual sounds for Player Ship Flying Sounds, Homing Missile, Base Missile, Barrier, Robot, Small-explosion, Large-explosion, Laser, Enemy Shot, Target, and Fuel. Those complete sounds not originating within the 8255A, are enabled by the Sound Generator Chip through a device called a Quad Switch/Driver (4016B) U17. U11 and VR1 (Volume Control, found on the Assy. A

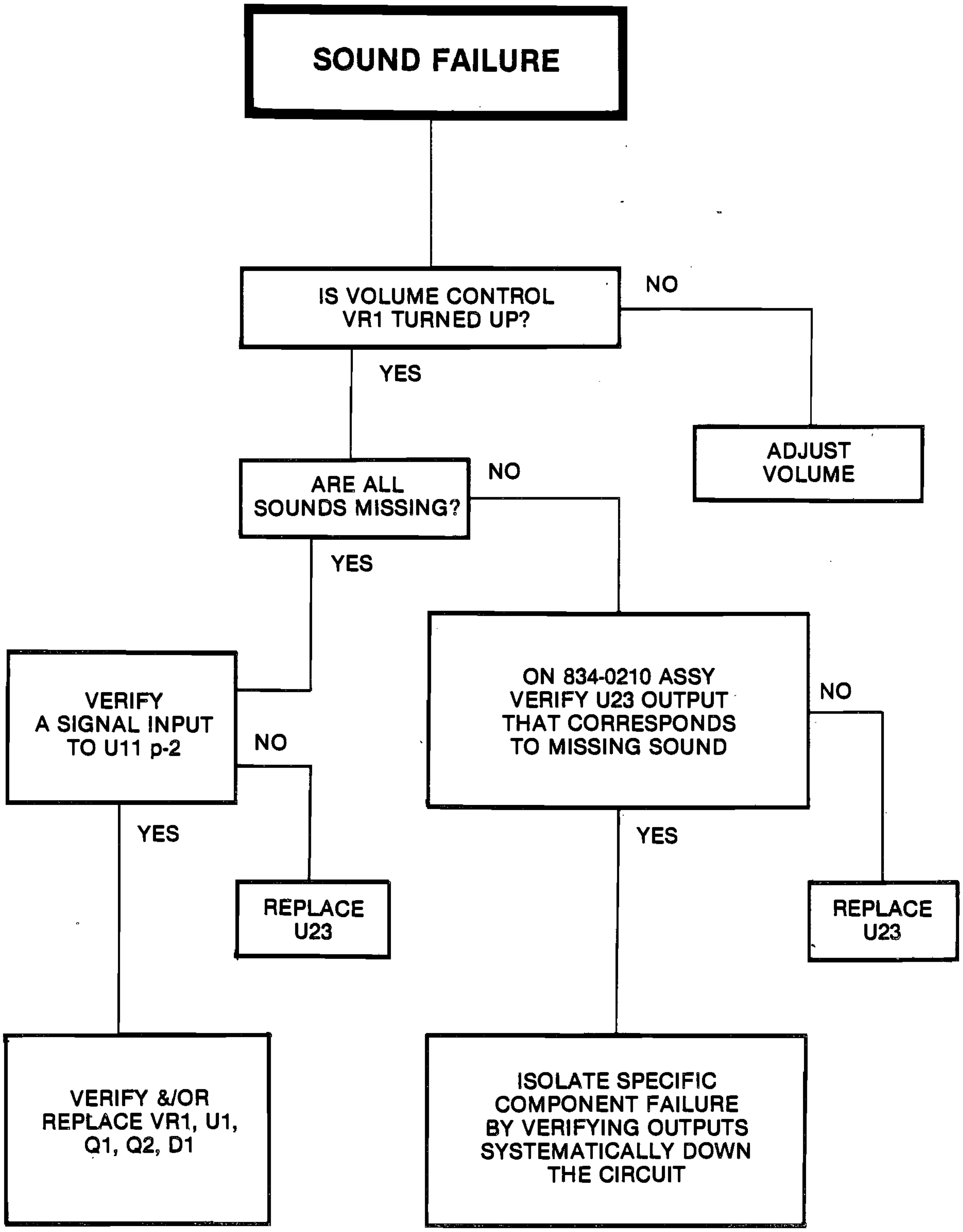
Board) set input biasing for Audio Amplifier U1, at an 8 ohm load. Speaker connections are made at P4 pins-3 and 4.

PLEASE NOTE - The following logic charts are for use as a general reference only, and are not intended to be all inclusive. Remember, good trouble-shooting technique begins with a thorough VISUAL examination, keeping power supply and harnessing considerations in mind as well.


PLAYER
CONTROL FAILURE
INITIATE SELF-TEST
CHECK P5, PIN OF
INDICATED LINE FAILURE.
5VDC WHEN OPEN,
0VDC WHEN CLOSED
NO
REPLACE
BUTTON/
JOYSTICK
YES
CHECK INPUT PIN
OF ASSOCIATED DATA
LATCH (U81, 82, 86, 87)
FOR 5VDC-O, 0VDC-C
NO
CHECK PULL-UP NETWORK
(I.e. R240, C119) FOR
OPENS, OR SHORTED CAP.
YES
REPLACE
DATA LATCH


COINAGE FAILURE
INITIATE SELF-TEST
DOES SERVICE SW. INDUCE CREDIT?
YES
NO
5VDC @ P5p-K,9?
YES
NO
SUSPECT FAULTY COIN MECH
SUSPECT U51,U66
5VDC @ P5p-3?
YES
NO
SUSPECT PWR. SUPP.
0VDC @ U88p-11?
YES
NO
SUSPECT U88,CPU
U84,89 94,101


VIDEO FAILURE
INITIATE SELF-TEST
NO
REPLACE INDICATED IC'S
YES
ACTIVITY @ P5p-19,W,X?
YES
NO
ACTIVITY @ P5p-20?
ACTIVITY @ U98 p-1-5,17,18,19?
YES
NO
YES
NO
MONITOR FAILURE
(SYNC) ACT. @ U19p-13?
SUSPECT U95-99
ACTIVITY @ P3p-43-50?
YES
NO
YES
NO
SUSPECT X-1, Q1,Q2,T1,OR U19
SUSPECT U48,U100
ACTIVITY @ U41p-5?
SUSPECT U39,59,61
YES
NO
SUSPECT U38,U41
SUSPECT U1,U2,U21


SOUND FAILURE
IS VOLUME CONTROL VR1 TURNED UP?
NO
ADJUST VOLUME
YES
ARE ALL SOUNDS MISSING?
NO
YES
VERIFY A SIGNAL INPUT TO U11 p-2
ON 834-0210 ASSY VERIFY U23 OUTPUT THAT CORRESPONDS TO MISSING SOUND
NO
YES
REPLACE U23
NO
YES
REPLACE U23
VERIFY &/OR REPLACE VR1, U1, Q1, Q2, D1
ISOLATE SPECIFIC COMPONENT FAILURE BY VERIFYING OUTPUTS SYSTEMATICALLY DOWN THE CIRCUIT

ZAXXON™ Index to IC's

IC No.	Part No.	Location No.	Description
Z80A	315-0041	U24(A)	Microprocessor
2114	315-0046	U70,U71(A)	RAM 1024 x 4 BIT
2532	316-1475	U29(A)	EPROM-1475 8 x 32 BIT
2564	316-1456	U93(B)	EPROM-1456 8 x 64 BIT
	316-1457	U92(B)	EPROM-1457
	316-1458	U91(B)	EPROM-1458
	316-1459	U90(B)	EPROM-1459
	316-1460	U113(B)	EPROM-1460
	316-1461	U112(B)	EPROM-1461
	316-1462	U111(B)	EPROM-1462
	316-1465	U77(B)	EPROM-1465
	316-1466	U78(B)	EPROM-1466
	316-1467	U79(B)	EPROM-1467
	316-1473	U27(A)	EPROM-1473
	316-1474	U28(A)	EPROM-1474
2716	316-1468	U68(A)	EPROM-1468
	316-1469	U69(A)	EPROM-1469
93419	315-0065	U46(B)	RAM TTL Isoplaner 64 x 9 BIT
93422A	315-0155	U42,U62(B)	RAM TTL Isoplaner 1024 x 4 BIT
10125	314-0243	U19(B)	Quad ECL to TTL Translator
8255AC-5	315-0152	U23(A)	Programmable Peripheral Interface (Sound Generator)
CD4016	315-0033	U17(A)	Quad Switch/Driver
LA4460	313-0097	U23(A)	Audio Power Amp
LM324	313-0034	U3-U5,U8-U12, U19,U20(A)	Om Amp (Single Supply)

IC No.	Part No.	Location No.	Description
MB3761	313-0101	U52(A)	Voltage Detector
MB4391M	313-0084	U13-16(A)	Analog Switch
MB7063	315-0071	U46(B)	RAM TTL Isoplaner 64 x 9 BIT
MB8128-15	315-0125	U37,U38(A)	16384-BIT STATIC RAM (NMOS)
MM5837	315-0035	U2(A)	Organ Noise Generator
NE555	314-0001	U6,U7,U18(A)	Timer
NE556	313-0022	U50(A)	Dual Timer
7406	314-0146	U30(A)	Hex Inverter/Buffer, drivers with open collectors - high volt O/P
7417	314-0051	U31(A)	Hex Buffer/Driver with open collectors - high volt O/P
7426	314-0031	U67(A)	Quad-2 input high volt interface positive NAD gate
74123	314-0016	U21,U22, U45,U46(A)	Dual retriggerable monostable multivibrators with clear
74393	314-0030	U49(A)	Dual-4 MIT Binary Counter
74LS00	314-0018	U10,U52(B)	Quad-2 Input NAD Gate
74LS02	314-0078	U9(B)	Quad-2 Input NOR Gate
74LS04	314-0019	U25,U42,U44,U60, U94,U101(A), U11,U22,U55,U71, U84,U99(B)	Hex inverter
74LS08	314-0058	U54(A),U76(B)	Quad-2 Input NAD Gate
74LS10N	314-0059	U84(A)	Triple-3 Input NAND Gate
74LS20	314-0060	U24,U32,U51, U108(B)	Dual-4 Input NAND Gate

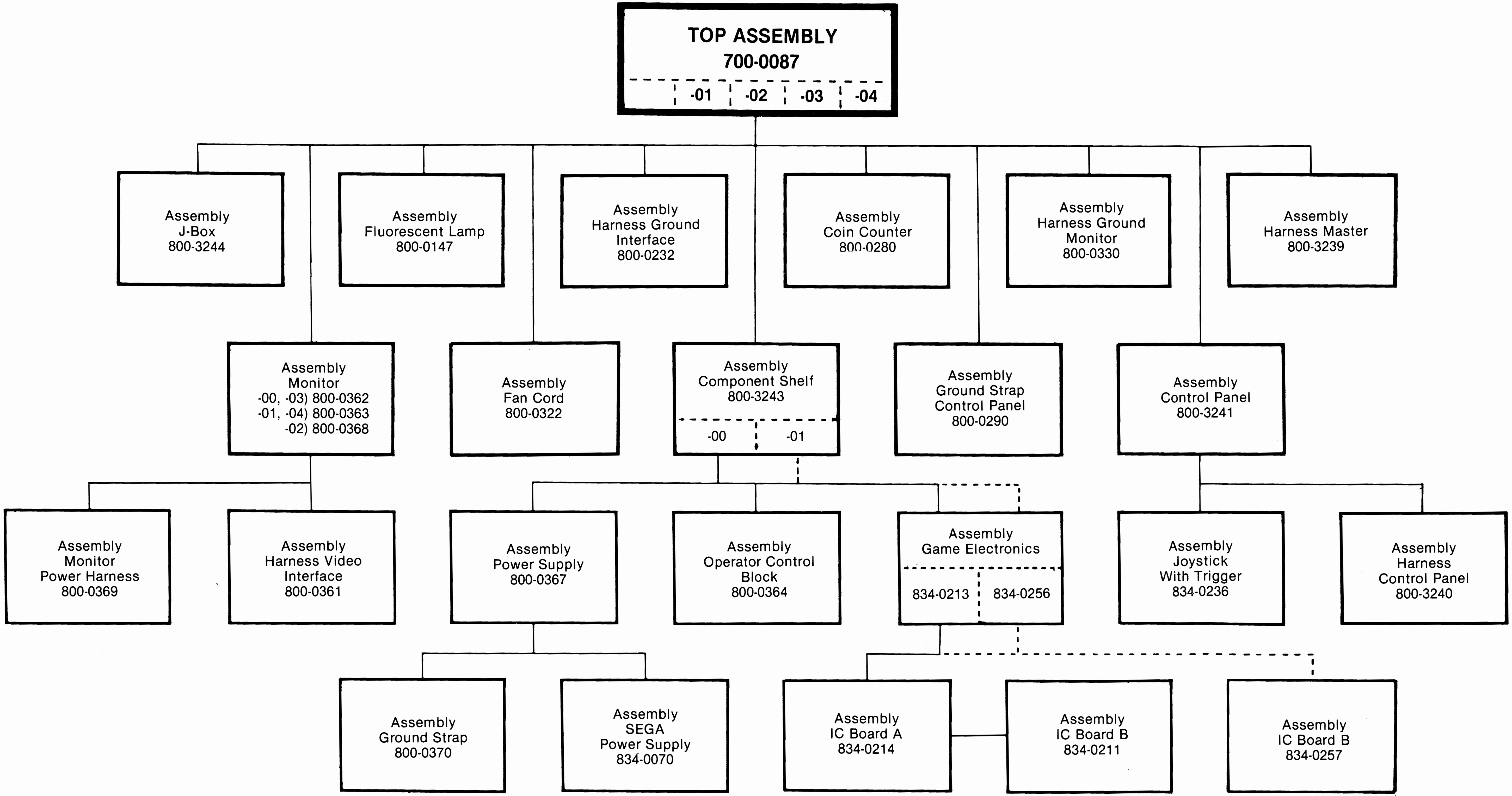
IC No.	Part No.	Location No.	Description
74LS27	314-0066	U99(A),U109(B)	Triple-3 Input NOR
74LS30	314-0067	U61,U77(A),U6(B)	8-Input Positive NAND Gate
74LS32	314-0068	U62,U63,U80(A), U35(B)	Quad-2 Input OR Gate
74LS74	314-0062	U51,U78,U89(A), U28,U29,U45(B)	DualD-type positive edge-triggered Flip-Flops with preset and clear
74LS86	314-0070	U93(A),U4,U12, U13,U23,U95, U107(B)	Quad-2 Input Exclusive OR Gate
74LS109	314-0237	U110(B)	Dual-positive edge-triggered Flip-Flop
74LS132	314-0056	U53(A)	Quad-2 Input NAND Schmitt Triggers
74LS138	314-0104	U33,U57-U59(A), U7(B)	3 to 8 Line Decoders/Demultiplexers
74LS139	314-0087	U32(A),U8(B)	Dual-2 to 4 Line Decoders/ Demultiplexers
74LS157	314-0076	U48,U74-U76, U92,U100(A), U18,U37,U39,U47, U49,U50,U59,U66, U105,U106(B)	Quad-2 to 1 Line Data Selector/ Demultiplexer (non inverted O/P)
74LS161	314-0097	U26,U27,U30, U31,U48(B)	Binary Counter, Asynchronous Clear
74LS174	314-0072	U95,U97(A), U85(B)	Hex D-type Flip-Flop

IC No.	Part No.	Location No.	Description
74LS175	314-0073	U36,U40,U41,U65, U66,U83(A)	Quad D-type Flip-Flop
74LS240	314-0083	U88(A)	Octal Buffer/Driver/Receiver (inverted 3-state O/P)
74LS244	314-0055	U34,U39,U95(A), U3(B)	Octal Buffer/Driver/Receiver (inverted 3-state O/P)
74LS245	314-0099	U43,U85(A), U57(B)	Octal Bus Transceiver
74LS259	314-0143	U55,U56(A)	8-BIT Addressable Latch
74LS273	314-0100	U16,U25,U96, U97,U100(B)	Octal D-type edge-triggered Flip-Flop
74LS283	314-0101	U14,U15,U33,U34, U53,U54,U56, U72-U75,U81-U83, U98(B)	4-BIT Binary Full-Adder, look ahead carry
74LS299	314-0122	U90,U91(A), U68-U70,U102-U104(B)	8-BIT Register, bi-directional universal shift/storage
74LS353	314-0272	U81,U82,U86, U87(A)	Dual 4 to 1 Line Data Selector
74LS367	314-0102	U26,U35,U47, U64(A),U94,U101, U118(B)	Hex Bus Driver
74LS368	314-0103	U5(B)	Hex Inverter, 3-state
74LS374	314-0093	U80,U114, U117(B)	Octal D-type edge-triggered Flip-Flop, 3-state

IC No.	Part No.	Location No.	Description
74LS377	314-0119	U73(A),U67, U86,U115(B)	Octal D-type Flip-Flop
74S112	314-0151	U38(B)	Dual-negative edge-triggered Flip-Flop
74S139	314-0178	U41(B)	Dual 2 to 4 Line Decoder/ Demultiplexer
74S163	314-0139	U1,U2,U21, U44,U64(B)	Binary Counter, Synchronous clear
74S260	314-0276	U58(B)	Dual-5 Input NOR Gate
74S373	314-0275	U61(B)	

PLEASE NOTE: (A) or (B) following the Location No. indicates that number can be found on Assy. 1C Bd. A, or Assy. 1C Bd. B, respectively.

ASSEMBLY PARTS BREAK-DOWN



NOTE: Top Assembly No.'s 700-0087 -00, -01, and -02 utilize Assy. Component Shelf 834-3243 -00, and Top Assembly No.'s 700-0087 -03 and -04 utilize Assy. Component Shelf 834-3243 -01.

NOTE: Assembly Game Electronics 834-0213 consists of IC Board A (834-0214) and IC Board B (834-0211). Assembly Game Electronics 834-0256 consists of IC Board A (834-0214) and IC Board B (834-0257).

TOP ASSEMBLY DRAWING NUMBER 700-0087-00

TOP ASSEMBLY DRAWING NUMBER 700-0087-01

TOP ASSEMBLY DRAWING NUMBER 700-0087-02

TOP ASSEMBLY DRAWING NUMBER 700-0087-03

TOP ASSEMBLY DRAWING NUMBER 700-0087-04

Item No.	Part No.	Qty. Req'd.					Description
		-00	-01	-02	-03	-04	
1	130-0002	1	1	1	1	1	Speaker cover 6 x 9
2	130-0020	1	1	1	1	1	Speaker game 6 x 9 OHM 10w
3							
4	140-0021	1	1	1	1	1	Cover J-Box
5	140-0071	1	1	1	1	1	Cabinet ZAXXON upright
6							
7							
8	220-0178	2	2	2	2	2	Draw catch
9	220-0194	2	2	2	2	2	Coin mech with lamp
	220-0195	2	2	2	2	2	Coin mech with lamp
10							
11	250-0038	1	1	1	1	1	Molding strip
12	250-0048	1	1	1	1	1	Clip Switch
13							
14							
15	250-0492	1	1	1	1	1	Molding logo
16	250-0497	2	2	2	2	2	Clamp component BD univ
17							
18	253-0222	2	2	2	2	2	Coin receptacle

TOP ASSEMBLY — DRAWING NUMBER 700-0087-00

TOP ASSEMBLY — DRAWING NUMBER 700-0087-01

TOP ASSEMBLY — DRAWING NUMBER 700-0087-02

TOP ASSEMBLY — DRAWING NUMBER 700-0087-03

TOP ASSEMBLY — DRAWING NUMBER 700-0087-04

Item No.	Part No.	Qty. Req'd. -00	-01	-02	-03	-04	Description
19	253-0259	1	1	1	1	1	Monitor panel ZAXXON
20	253-0258	1	1	1	1	1	Panel logo ZAXXON
21							
22	260-0001	1	1	1	1	1	Fan axial cooling
23	280-0362	2	2	2	2	2	Elec. crimp sleeve 24-18 AWG
24	280-0005	25	25	25	25	25	Cable tie
25	280-0324	1	1	1	1	1	Cable clamp nylon
26							
27							
28							
29	281-0014-28	4	4	4	4	4	Scr #8-32 x 1 3/4 in oval HD machine
30	281-0042-32	4	4	4	4	4	Scr #6-18 x 2 in pan HD type A/AB
31	281-0044-08	2	2	2	2	2	Scr #8-15 x 1/2 in pan HD type A/AB
32	281-0045-12	6	6	6	6	6	Scr #10-12 x 3/4 in pan HD type A/AB
33	281-0052-08	4	4	4	4	4	Scr #6-18 x 1/2 in flt HD type A/AB
34							
35	282-0005-20	14	14	14	14	14	Bolt carriage #10-24 x 1 1/4 in mach
36							
37	282-0017-16	2	2	2	2	2	Bolt hex 1/4 - 20 x 1.000 in mach

TOP ASSEMBLY DRAWING NUMBER 700-0087-00

TOP ASSEMBLY DRAWING NUMBER 700-0087-01

TOP ASSEMBLY DRAWING NUMBER 700-0087-02

TOP ASSEMBLY DRAWING NUMBER 700-0087-03

TOP ASSEMBLY DRAWING NUMBER 700-0087-04

Item No.	Part No.	Qty. Req'd. -00	-01	-02	-03	-04	Description
38	282-0017-24	6	6	6	6	6	Bolt hex 1/4 - 20 x 1.500 in mach
39							
40	283-0015-00	1	1	1	1	1	Nut wing mach #10-24
41	283-0024-00	4	4	4	4	4	Nut hex mach #8-32
42	283-0025-00	17	17	17	17	17	Nut hex mach #10-24
43							
44	284-0002-00	4	4	4	4	4	Washer flat std O.D. #6
45	284-0004-00	4	4	4	4	4	Washer flat std O.D. #8
46	284-0006-00	12	12	12	12	12	Washer flat std O.D. #10
47	284-0016-00	4	4	4	4	4	Washer flat sm O.D. #10
48	284-0027-20	8	8	8	8	8	Washer flat 1/4 - 1.250 large O.D. fender
49	284-0034-00	6	6	6	6	6	Washer lock split #8
50	284-0036-00	21	21	21	21	21	Washer lock split #10
51	284-0037-00	8	8	8	8	8	Washer lock split #1/4
52							
53	286-0044-12	4	4	4	4	4	Scr #8-15 x 3/4 in PN HD S/M blk
54							
55	390-0019	1	1	1	1	1	Lamp fluorescent

TOP ASSEMBLY DRAWING NUMBER 700-0087-00

TOP ASSEMBLY DRAWING NUMBER 700-0087-01

TOP ASSEMBLY DRAWING NUMBER 700-0087-02

TOP ASSEMBLY DRAWING NUMBER 700-0087-03

TOP ASSEMBLY DRAWING NUMBER 700-0087-04

Item No.	Part No.	Qty. Req'd. -00	-01	-02	-03	-04	Description
56							
57	420-0030	1	1	1	1	1	Decal Caution 115V
58	420-0568	1	1	1	1	1	Decal FCC
59	420-0624	1	1	1	1	1	Light Baffle univ cab
60	420-0718	1	1	1	1	1	Graphic interior #1 ZAXXON
61	420-0722	1	1	1	1	1	Box decal ZAXXON
62	420-0724	1	1	1	1	1	Manual ZAXXON
63	420-0727	1	1	1	1	1	Side graphic - left ZAXXON
64	420-0729	1	1	1	1	1	Side graphic - right ZAXXON
65							
66	800-3244	1	1	1	1	1	J-box "Z" assy
67	800-0147-01	1	1	1	1	1	Assy fluor lamp 2
68	800-0232	1	1	1	1	1	Assy harn GND INTF
69	800-0280	1	1	1	1	1	Assy coin counter
70	800-0371	1	1	1	1	1	Speaker harn assy
71	800-0372	1	1	1	1	1	Coin mech harn assy ZAXXON
72	800-3243-01	--	--	--	1	1	Component shelf assy ZAXXON 2
73	800-3243-00	1	1	1	--	--	Component shelf assy ZAXXON
74	800-0290	1	1	1	1	1	Assy GND strap control PNL

TOP ASSEMBLY DRAWING NUMBER 700-0087-00

TOP ASSEMBLY DRAWING NUMBER 700-0087-01

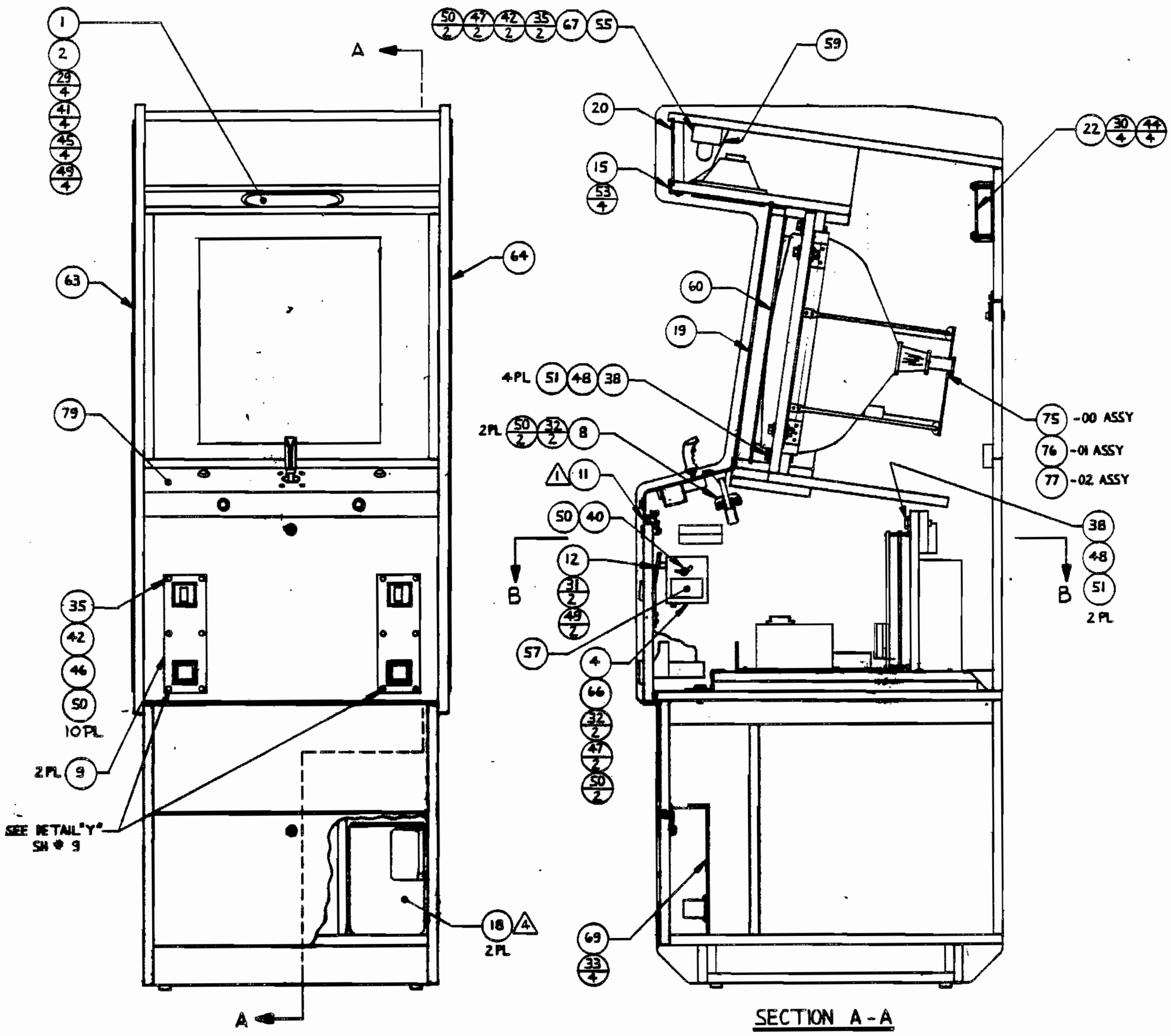
TOP ASSEMBLY DRAWING NUMBER 700-0087-02

TOP ASSEMBLY DRAWING NUMBER 700-0087-03

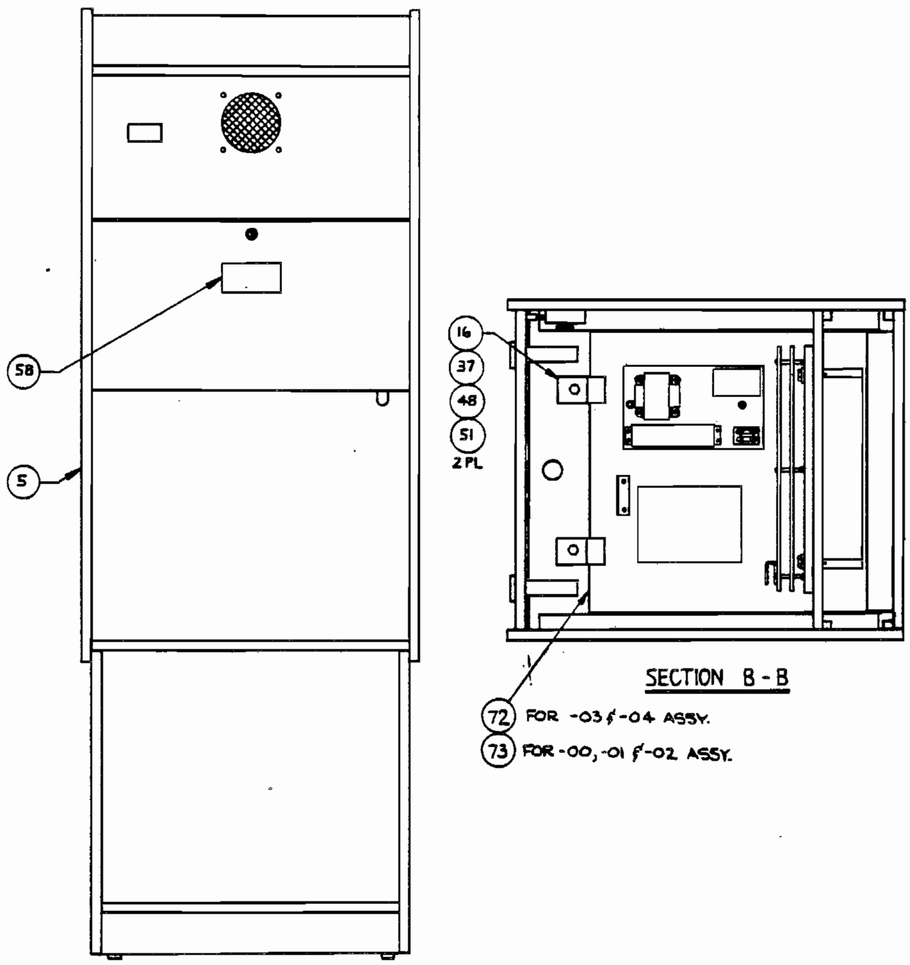
TOP ASSEMBLY DRAWING NUMBER 700-0087-04

Item No.	Part No.	Qty. Req'd.					Description
		-00	-01	-02	-03	-04	
75	800-0362	1	--	--	1	--	Mon assy vert MT ZAXXON
76	800-0363	--	1	--	--	1	Monitor assy nanao ZAXXON
77	800-0368	--	--	1	--	--	Monitor assy E/H horizontal
78	800-0322	1	1	1	1	1	Assy cord fan
79	800-3241-01	1	1	1	1	1	Control PNL complete assy ZAXXON
80	800-0370	1	1	1	1	1	GND strap assy ZAXXON
81							
82	800-0330	1	1	1	1	1	Assy harn GND monitor raster

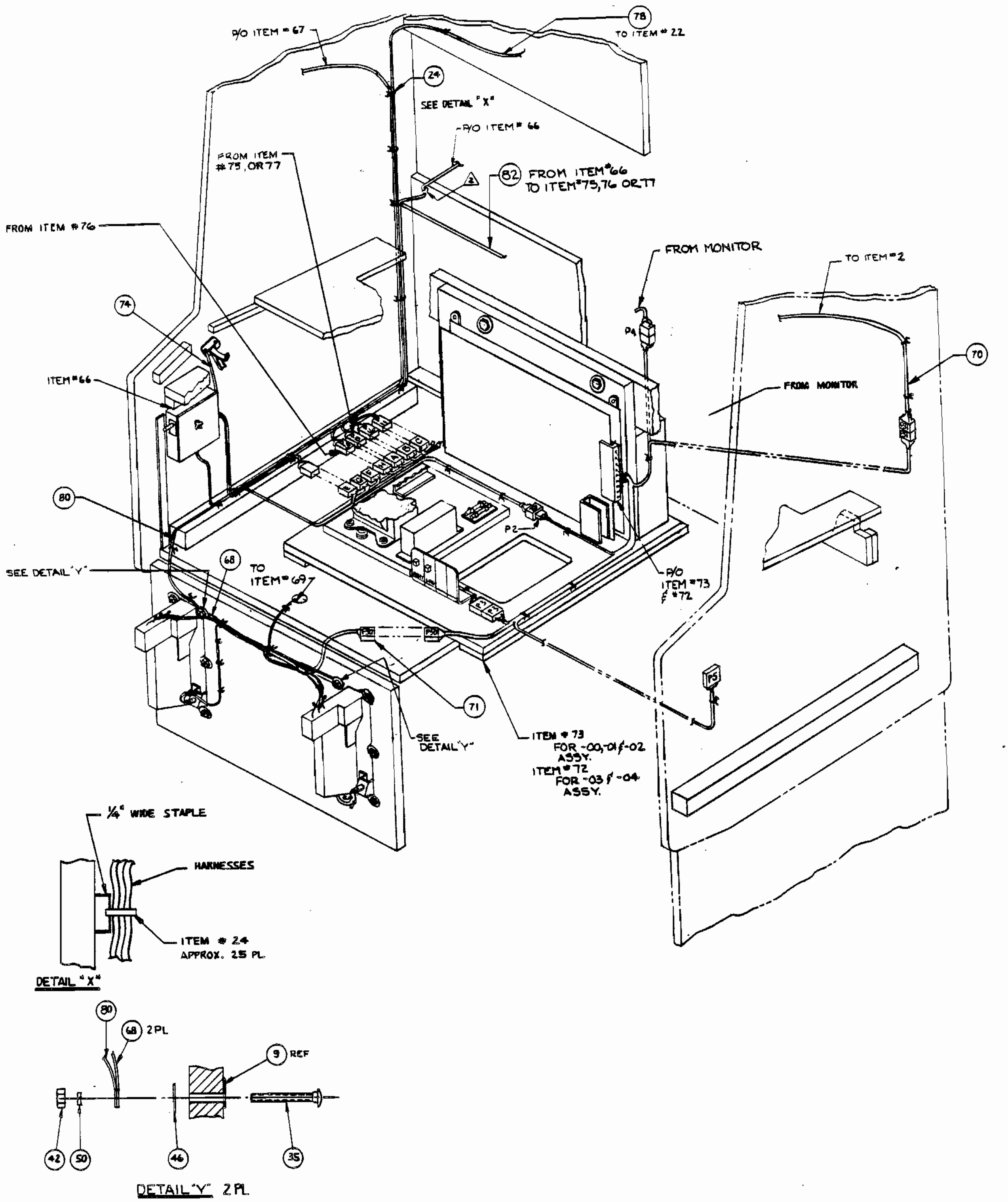
Top Assembly **700-0087**



Top Assembly 700-0087



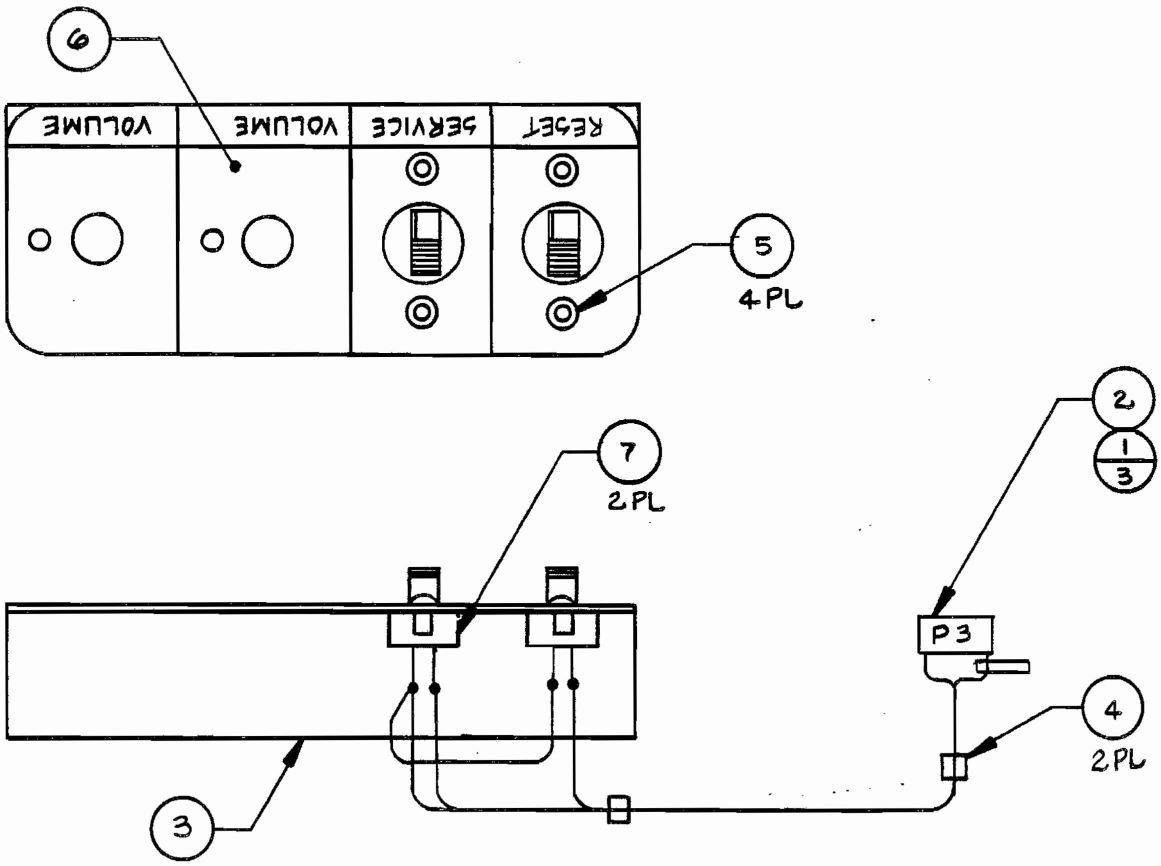
Top Assembly 700-0087



ASSEMBLY OPERATOR CONTROL BLOCK DRAWING NUMBER 800-0364

Item No.	Part No.	Qty. Req'd.	Description
1	211-0041	3	Conn pin amp
2	211-0060	1	Conn cap amp 3 pin
3	250-0462	1	Volume control bracket
4	280-0005	2	Cable tie
5	285-0001-04	4	Rivet MND PL .125 dia x .250 lg
6	420-0623	1	Decal Operator Panel
7	510-0051	2	SW pushbutton slide
8	600-0092-50	1.5'	Wire, elec hook-up stranded, black
9	600-0092-48	1.6'	Wire, elec hook-up stranded, gray
10	600-0092-47	1 .5'	Wire, elec hook-up stranded, violet

Assembly Operator Control Block 800-0364

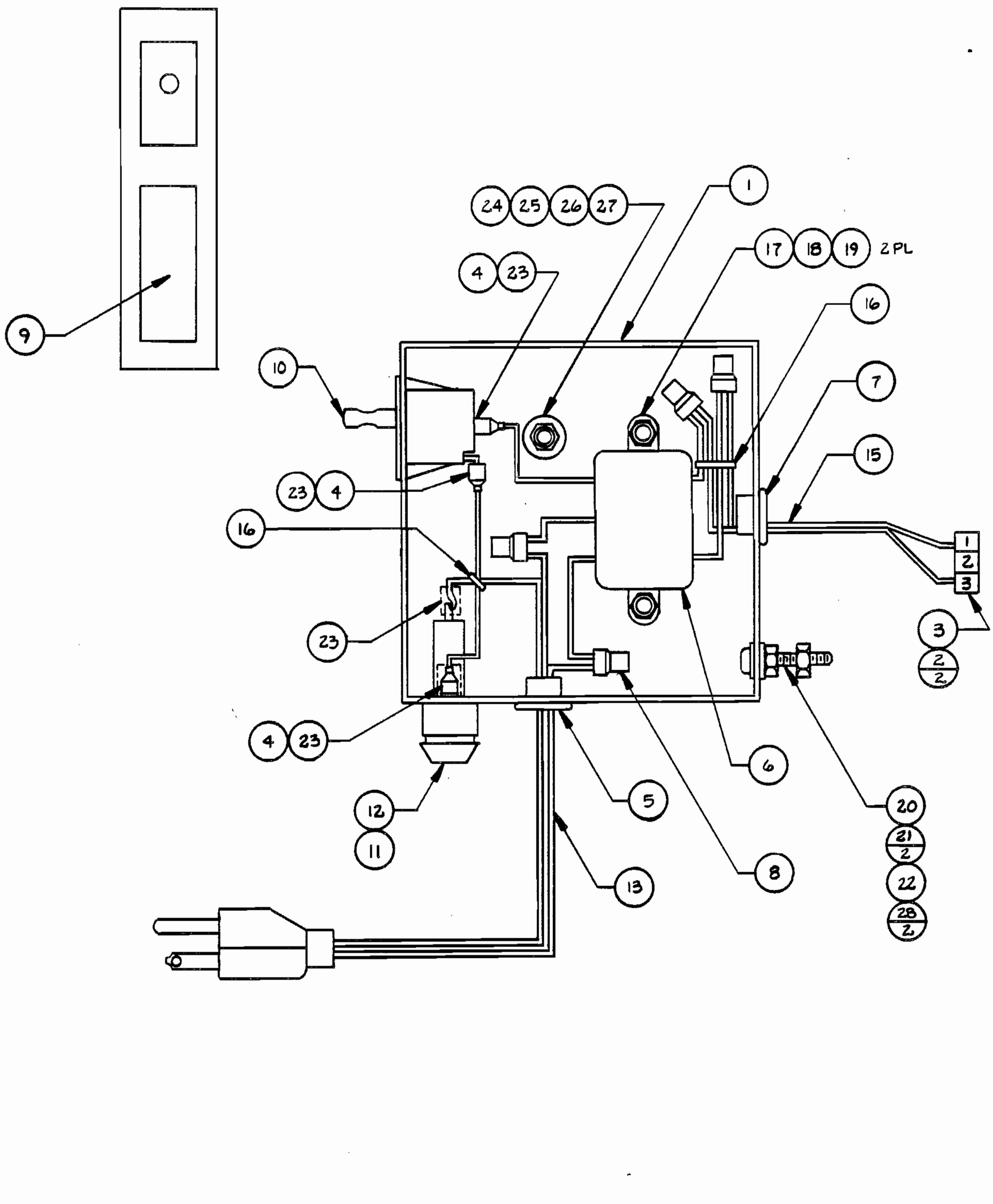


ASSEMBLY JUNCTION BOX DRAWING NUMBER 800-3244

Item No.	Part No.	Qty. Req'd.	Description
1	140-0020	1	Junction box metal
2	211-0042	2	Conn socket amp
3	211-0060	1	Conn female cap 3 pin amp
4	211-0164	3	Conn quick 3/16 female insulated
5	280-0361	1	Bushing S/rel AC cord
6	270-0001	1	Filter EMI
7	280-0007	1	Bushing S/rel 1/2
8	280-0362	4	Electric crimp sleeve 24-18 AWG
9	420-0598	1	Decal 2 amp fuse
10	510-0013	1	Switch SPDT cherry
11	514-0001	1	Fuse 2 amp 250V S.B.
12	514-0005	1	Holder fuse
13	600-0001	1	Cord line 3 cond
14			
15	600-0079	2'	Cord line zip
16	280-0005	2	Cable tie
17	281-0002-10	2	SCR PN HD Phl #6-32 x .625 mach
18	283-0022-00	2	Nut hex HD #8-32 mach
19	284-0042-00	2	Washer, lock int tooth #6
20	281-0004-12	1	SCR PN HD Phil #8-32 x .750 mach
21	283-0024-00	2	Nut hex HD #8-32 mach
22	284-0044-00	1	Washer, lock int tooth #8
23		.5'	Shrink tubing - 1/4 dia
24	284-0007-00	1	Washer, flat std O.D. 1/4

Item No.	Part No.	Qty. Req'd.	Description
25	283-0025-00	1	Nut, hex HD #10-24 mach
26	282-0005-28	1	Bolt carriage #10-24 x 1.750 mach
27	310-0016-16	1	Insul tubing .187 I.D.
28	284-0004-00	2	Washer flat std O.D. #8

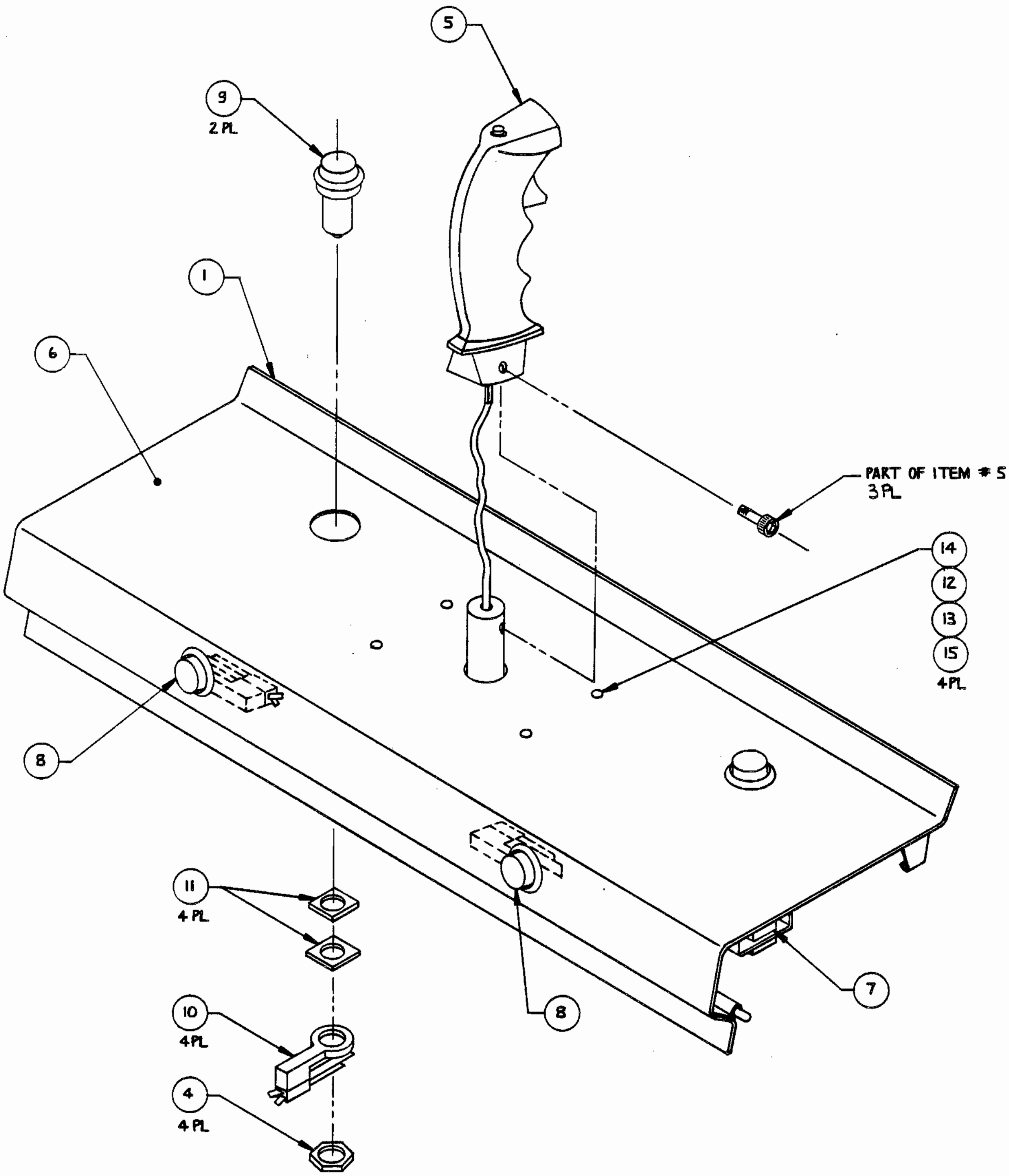
Assembly Junction Box 800-3244



ASSEMBLY CONTROL PANEL DRAWING NUMBER 800-3241

Item No.	Part No.	Qty. Req'd.	Description
1	250-0535	1	Subpanel metal ZAXXON
2	280-0005	9	Cable tie
3	280-0327	2	Base tie wrap
4	280-0329	4	Nut hex pal 1/2 - 13
5	834-0236	1	Assy joystick w/trigger
6	253-0260	1	Graphic control panel ZAXXON
7	800-3240	1	Assy harn control panel
8	240-0111	2	Button plunger blue
9	240-0006	2	Button plunder red
10	510-0023	4	WICO switch
11	253-0031	8	Spacer WICO switch
12	284-0006-00	4	Washer flat std O.D. stl #10
13	284-0036-00	3	Washer lock split stl #10
14	282-0005-12	4	Bolt carriage HD #10 - 24 x .750 lg
15	283-0025-00	4	Nut hex mach #10-24
16	211-0041	1	Conn pin amp
17	600-0092-50	4.54'	Wire elec hookup stranded, black
18	600-0092-47	1.25'	Wire elec hookup stranded, violet

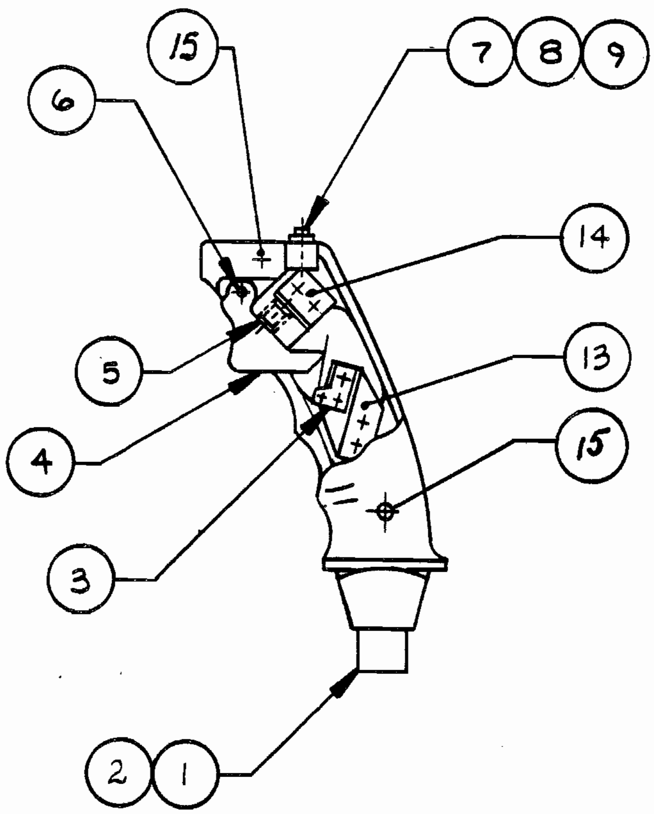
Assembly Control Panel 800-3241

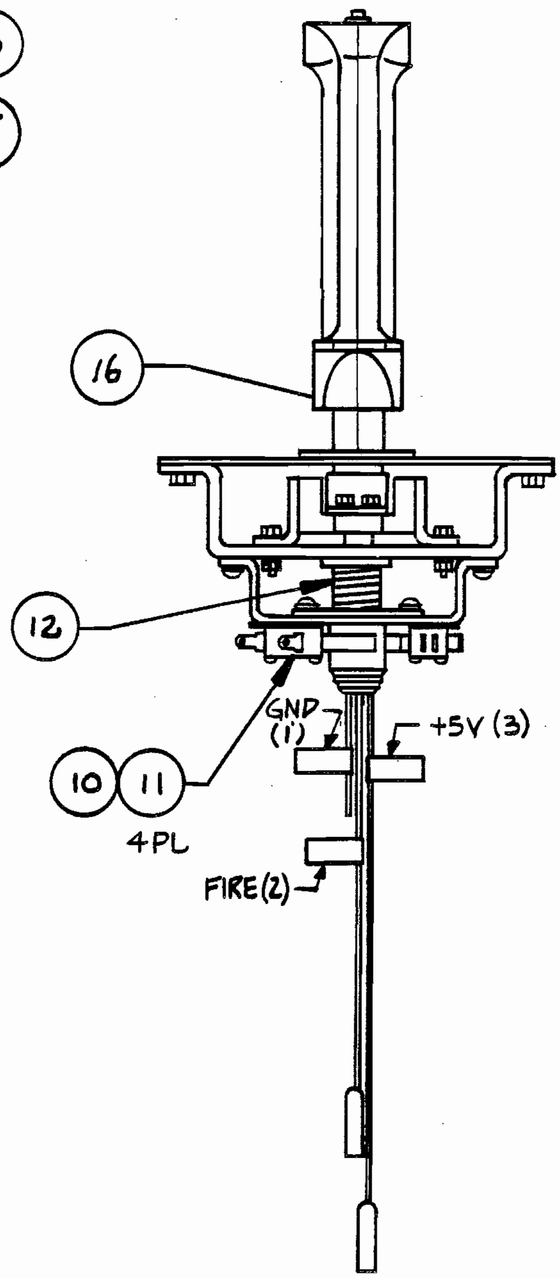


ASSEMBLY JOYSTICK WITH TRIGGER DRAWING NUMBER 834-0236

Item No.	Part No.	Qty. Req'd.	Description
1	601-0733	1	Handle casting, left
2	601-0732	1	Handle casting, right
3	509-0058	1	Swizch micro type
4	601-0293	1	Trigger
5	125-0011	1	Compression spring
6	123-0070	1	Shaft
7	390-0003	1	Light emitting diode
8	390-0066	1	Holder, for LED lamp
9	470-0221	1	Res 220 Ohm 1/4 W 5%
10	310-0012	4	Paper insulator
11	509-0149	4	Switch, micro type
12	125-0101	1	Compression spring
13	105-0127	1	Switch bracke
14	105-0126	1	Spring bracket
15	111-1050	2	Screw, tamperproof, PH, black M4 x 16
16	111-1051	1	Screw, tamperproof, PH, black, M5 x 10

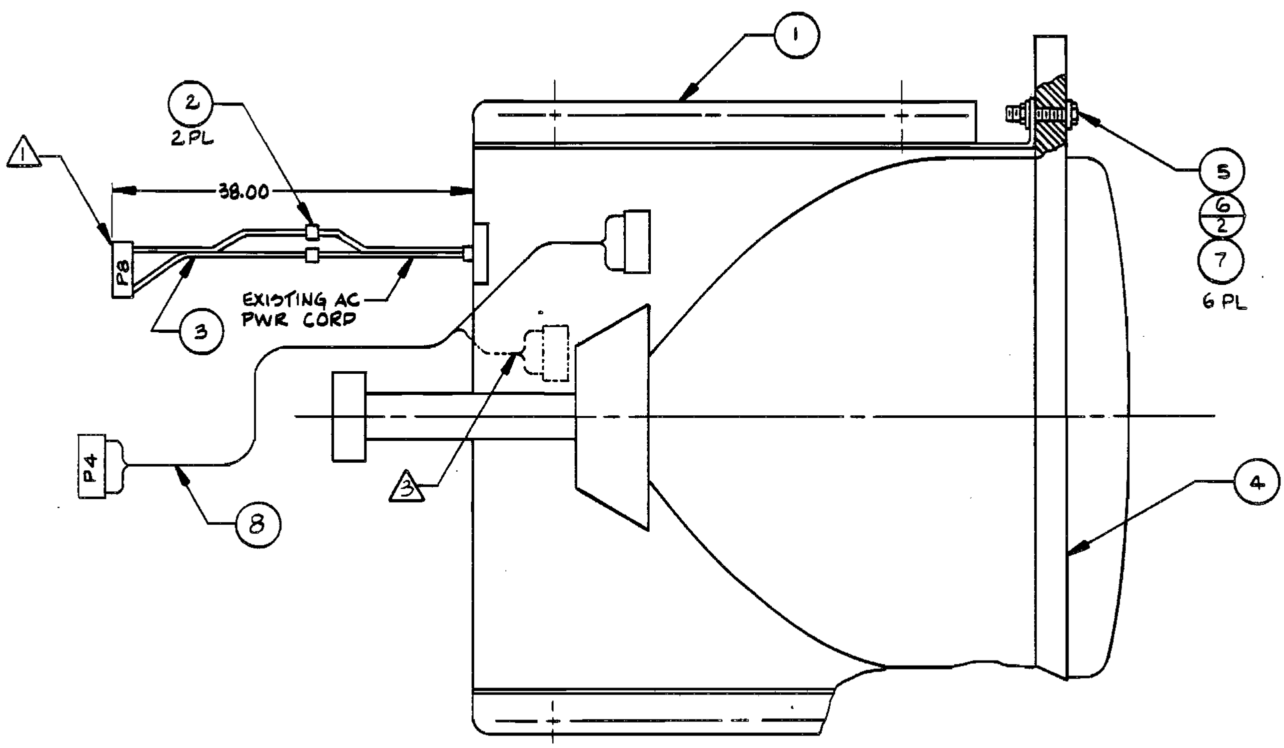
Assembly Joystick With Trigger 834-0236





Item No.	Part No.	Qty. Req'd.	Description
1	200-0019	1	Monitor 19" vertical Wells Gardner
2	200-0022	1	Monitor 19" vertical Electrohome
3	280-0359	2	Elec crimp sleeve
4	800-0369	1	Assy harness AC "Z"
5	252-0175	1	Monitor mounting board
6	282-0017-24	6	Hex head bolt 1/4 - 20 x 1.500 LG
7	284-0027-16	12	Flat washer, large O.D. steel 1/4
8	283-0007-00	6	Nut hex, self-locking, mach 10-24
9	800-0361	1	Assy harn video INTF

Assembly Color Monitor 800-0362



MAIN BOARD

Part No.	Description	Ref. Des.
Resistors		
	33k Ohm, ±10%, 1/2W carbon	R603
	470 Ohm, ±10%, 5W WW	R606
	2.7k Ohm, ±10%, 5W WW	R607
	1.2k Ohm, ±5%, 1W MO	R608
	22 Ohm, ±5%, 1/8W carbon	R610
	1k Ohm, ±5%, 1/2W carbon	R611
	470 Ohm, ±10%, 1/2W carbon	R612
	1.2k Ohm, ±5%, 1W MO	R613
	680k Ohm, ±5%, 1/2W comp	R614
	270k Ohm, ±5%, 1/2W comp	R615
	2.7 Ohm, ±5%, 1/8W carbon	R616
	68k Ohm, ±5%, 1/8W carbon	R617
	1k Ohm, ±5%, 1/2W carbon	R624
	2.2 Ohm, ±10%, 5W MO	R631
	120 Ohm, ±5%, 5W carbon	R632
	2.2 Ohm, ±5%, 1/8W carbon	R634
	6.8 Ohm, ±5%, 1/2W carbon	R635
	33k Ohm, ±5%, 1/8W carbon	R641
	15k Ohm, ±5%, 1/8W carbon	R642
	15 Ohm, ±10%, 2W carbon	R647
	1.8k Ohm, ±10%, 1/2W carbon	R649
	270 Ohm, 10%, 1/2W carbon	R650

MONITOR 19" VERTICAL - WELLS GARDNER 19K 4675 DRAWING NUMBER 200-0019

Part No.	Description	Ref. Des.
	240 Ohm, ±10%, 2W carbon	R651
	6/8k Ohm, ±10%, 1/2W carbon	
Semiconductors		
482-0262	Transistor, 2SC1893	TR601
481-0214	Rectifier, (SI) RM-2AV 600V	X601
481-0214	Rectifier, (SI) RM-2AV 600V	X602
481-0214	Rectifier, (SI) RM-2AV 600V	X603
481-0214	Rectifier, (SI) RM-2AV 600V	X604
481-0215	Diode (HS) SB-2CGL 1200V min	X605
481-0149	Diode (SI) IS2473-772	X606
481-0216	Diode (HS) RC-2V 0.8 US	X607
481-0217	Diode (HS) RU-2V	X608
481-0217	Diode (HS) RU-2V	X609
481-0218	Rectifier, power (SI) 500V PIV	X610
481-0218	Rectifier, power (SI) 500V PIV	X611
481-0218	Rectifier, power (S1) 500V PIV	X612
Transformers & Coils		
180-0020	Coil, line filter R-3	L601
180-0014	Coil, filter, 10uh	L602
560-0094	Transformer, hor drive	T602
560-0095	Transformer, side PC	T603
180-0015	Width coil	L702

Part No.	Description	Ref. Des.
Capacitors		
	0.1 uf, 125V, ±20% MM	C601
	2200 pf, Z5F, ±10% ceramic	C602
	2200 pf, 125V ceramic	C603
	2200 pf, Z5F, ±10% ceramic	C604
	330 uf, 200V electrolytic	C605
	47 uf, 160V electrolytic	C608
	.0033 uf, 500V ±10% ceramic	C609
	.01 uf, 500V, ±10% ceramic	C610
	100 pf, 3KV, ±10% ceramic	C611
	.022 uf, 200v, ±10% PP	C612
	220 uf, 25V electrolytic	C613
	33 uf, 25V electrolytic	C614
	0.39 uf, 200V, ±10% PP	C615
	47 pf, 500V ceramic	C616
	1 uf, 50v electrolytic	C617
	1 uf, 50V electrolytic	C619
	0.1 uf, 100V, ±10% mylar	C620
	0.1 uf, 1.5KV, ±20% paper	C621
	1000 uf, 35V electrolytic	C622
	470 uf, 25V electrolytic	C623
	100 uf, 25V electrolytic	C624
	10 uf, 160V electrolytic	C625
	100 pf, 500V, ±10% ceramic	C626

Part No.	Description	Ref. Des.
	39 pf, 500V, ±10% ceramic	C627
	2200 pf, 500V, ±10% ceramic	C628
	6900 pf, 1.5KV, ±5% PP	C629
	2.2 uf, 50V electrolytic	C633
	3 pf, 2kV, ±0.5 pf ceramic	C637
	.056 uf, 10% mylar	C638
Miscellaneous		
	Fuse (UL/CSA) 3A-125	F601
	Socket, 6 pin	J607
	Plug, 3 pin (GT)	P602
	Plug, 4 pin (NM)	P604
	Plug, 6 pin (GT)	P607
	Plug, 3 pin (NM)	P608
	Plug, 2 pin (NM)	P611
	Thermistor	TH601
	Plug, 6 pin	P201
	Plug, 6 pin	P202
	VERT/HOR BOARD	
Resistors		
	820 Ohm, ±5%, 1/8W carbon	R301
	12k Ohm, ±5%, 1/8W carbon	R302
	15k Ohm, ±5%, 1/8W carbon	R303
	10k Ohm, ±5%, 1/8W carbon	R304
	330k Ohm, ±5%, 1/8W carbon	R305

MONITOR 19" VERTICAL - WELLS GARDNER 19K 4675 DRAWING NUMBER 200-0019

Part No.	Description	Ref. Des.
	1k Ohm, ±5%, 1/8W carbon	R306
	1.5k Ohm, ±5%, 1/8W carbon	R307
	2.2k Ohm, ±5%, 1/8W carbon	R309
	470k Ohm, ±5%, 1/8W	R310
	56k Ohm, ±5%, 1/8W carbon	R311
	100k Ohm, ±5%, 1/8W carbon	R312
	10k Ohm, ±5%, 1/8W carbon	R313
	47k Ohm, 5%, 1/8W carbon	R314
	820 Ohm, ±5%, 1/8W carbon	R315
	120 Ohm, ±5%, 1/8W carbon	R316
	2.2 Ohm, ±5%, 1/2W carbon	R317
	33k Ohm, ±5%, 1/4W carbon	R318
	10 Ohm, ±5%, 1/8W carbon	R319
	15k Ohm, ±5%, 1/8W carbon	R320
	560 Ohm, ±5%, 1/2 W carbon	R321
	22 Ohm, ±5%, 2W MO	R322
	1.5 Ohm, ±5%, 1/8W carbon	R323
	27k Ohm, ±5%, 1/8W carbon	R324
	47 Ohm, ±5%, 1/8W carbon	R325
	820 Ohm, ±5%, 1/8W carbon	R328
	10k Ohm, ±5%, 1/8W carbon	R330
	220k Ohm, ±5%, 1/8W carbon	R331
	2.2k Ohm, ±5%, 1/8W carbon	R351
	15k Ohm, ±5%, 1/8W carbon	R352

MONITOR 19" VERTICAL - WELLS GARDNER 19K 4675 DRAWING NUMBER 200-0019

Part No.	Description	Ref. Des.
	18k Ohm, ±5%, 1/8W carbon	R353
	3.9k Ohm, ±5%, 1/8W carbon	R354
	12k Ohm, ±5%, 1/8W carbon	R355
	470 Ohm, ±5%, 1/8W carbon	R356
	2.2k Ohm, ±5%, 1/8W carbon	R357
	1.2k Ohm, ±5%, 1/8Wcarbon	R358
	68k Ohm, ±5%, 1/8W carbon	R359
	27 Ohm, ±5%, 1/4W carbon	R360
	1.2k Ohm, ±5%, 1/8W carbon	R361
	1.2k Ohm, ±5%, 1/8W carbon	R363
	47k Ohm, ±5%, 1W MO	R364
	56k Ohm, ±5%, 1/2W carbon	R365
	3.3k Ohm, ±5%, 1/8W carbon	R366
	2.2k Ohm, ±5%, 1/2W carbon	R367
	3.9k Ohm, ±5%, 1/8W carbon	R368
	3.3k Ohm, ±5%, 1/4W carbon	R369
	1k Ohm, ±5%, 1/4W carbon	R370
	2.7k Ohm, ±5%, 1/4W carbon	R371
	2.2k Ohm, ±5%, 1/4W carbon	R383
	8.2k Ohm, ±5%, 1/4W carbon	R384
	Varistor, 250k Ohm, vert hold	VR301
	Varistor, 20k Ohm, vert size	VR302
	Varistor, 50k Ohm, hor hold	VR351

Part No.	Description	Ref. Des.
Capacitors		
	0.15 uf, 50V ±10% mylar	C301
	0.022 uf, 50V, ±10% mylar	C302
	0.1 uf, 50V, ±10% mylar	C304
	2.2 uf, 50V, electrolytic	C306
	0.15 uf, 50V, ±10% mylar	C307
	0.1 uf, 50V, ±10% mylar	C309
	22 uf, 16V electrolytic	C310
	1000 uf, 35V electrolytic	C311
	0.0082 uf, 50V, ±10% ceramic	C312
	47 uf, 50V electrolytic	C313
	10 uf, 25V electrolytic	C315
	3300 uf, 50V, ±10% mylar	C316
	100 pf 50V, ±10% ceramic	C317
	1500 pf, 50V, ±10% ceramic	C351
	1000 pf, 50V, ±10% ceramic	C352
	0.022 uf, 50V, ±10% mylar	C353
	0.1 uf, 50V, ±10% mylar	C355
	4.7 uf, 25V electrolytic	C356
	0.015 uf, 200V, ±10% PP	C357
	0.018 uf, 200V, ±10% PP	C358
	4.7 uf, 160V electrolytic	C359
	0.01 uf, 50V, ±10% ceramic	C360
	0.015 uf, 50V, ±10% mylar	C361

Part No.	Description	Ref. Des.
	10 uf, 50V electrolytic	C362
	0.01 uf, 630V, ±10% PP	C363
	0.01 uf, 50V, ±10% ceramic	C364
Semiconductors		
482-0282	Transistor, 2SA826Q	TR301
482-0261	Transistor, 2SC1740Q	TR302
482-0283	Transistor, 2SA1740Q	TR303
482-0261	Transistor, 2SC1740Q	TR304
452-0284	Transistor, 2SA490YLBGLI	TR305
482-0285	Transistor, 2SC1625YLBGLI	TR306
482-0261	Transistor, 2SC1740R	TR307
482-0261	Transistor, 2SC1740Q	TR308
482-0117	Transistor, 2SA854Q	TR351
482-0286	Transistor, 2SC1722BKS	TR352
482-0261	Transistor, 2SC1740Q	TR353
482-0282	Transistor, 2SA826Q	TR354
481-0149	Diode (SI) IS 2473-T72	X301
481-0149	Diode (SI) IS2473-T72	X302
481-0099	Diode (GE), IN60TVGL	X303
481-0219	Diode (SI) ISS81	X304
481-0219	Diode (SI) ISS81	X305
481-0219	Diode (SI) 1SS81	X306
481-0220	Diode (SI) MA26W	X307
481-0149	Diode (SI) IS2473	X308

Part No.	Description	Ref. Des.
481-0149	Diode (SI) IS2473-T72	X351
481-0149	Diode (SI) IS2473-T72	X352
481-0149	Diode (SI) IS2473-T72	X53
481-0149	Diode (SI) IS2473-T72	X54
481-0221	Diode (Zener) RD10EBI	X355
481-0222	Diode (HS) RU-1 0.3 US	X366
Miscellaneous		
204X9300-958	Socket, 6 pin	J301
204X9300-958	Socket, 6 pin	J302
204X9601-195	Plug, 6 pin	P301
204X9601-195	Plug, 6 pin	P302
201X0000-534	Thermistor	TH301
Transformers & Coils		
101-0030	Coil, horiz osc	L351

POWER BOARD

Resistors

	180 Ohm, ±10%, 15W WW	R501
	100 Ohm, ±5%, 1/8W carbon	R502
	1k Ohm, ±5%, 1/8W carbon	R503
	560 Ohm, ±5%, 1/8W carbon	R504
	39k Ohm, ±5%, 1W MO	R505
	6.8k Ohm, ±5%, 1/8W carbon	R506
	Varistor volt adj	VR501

Part No.	Description	Ref. Des.
Capacitors		
	10uf, 160V electrolytic	C501
	1500 pf, 50V, ±10% ceramic	C502
	22 uf, 16V electrolytic	
Semiconductors		
482-0261	Transistor, 2SC1740Q	TR501
482-0288	Transistor, 2SC1454	TR502
481-0135	Diode (SI) zener EQB01-06V	X501
481-0149	Diode (SI) IS2473-T72	X502
Miscellaneous		
	Socket, 6 pin	J501
	Plug, 6 pin	P501
	Thermistor	TH501

NECK BOARD

Part No.	Description	Ref. Des.
Resistors		
	1.8k Ohm, ±5%, 1/8W carbon	R401
	1.8k Ohm, ±5%, 1/8W carbon	R402
	1.8k Ohm, ±5%, 1/8W carbon	R403
	150 Ohm, ±5%, 1/8W carbon	R404
	220 Ohm, ±5%, 1/8W carbon	R405
	150 Ohm, ±5%, 1/8W carbon	R406
	390 Ohm, ±5%, 1/4W carbon	R407
	390 Ohm, ±5%, 1/4W carbon	R408
	4.7k Ohm, ±5%, 1/8W carbon	R409

Part No.	Description	Ref. Des.
	4.7k Ohm, ±5%, 1/8W carbon	R410
	4.7k Ohm, ±5%, 1/8W carbon	R411
	12k Ohm, ±5%, 2.0W metal oxide	R412
	12k Ohm, ±5%, 2.0W metal oxide	R413
	12k Ohm, ±5%, 2.0W metal oxide	R414
	2.7k Ohm, ±10% 1/2W comp	R415
	2.7k Ohm, ±10%, 1/2W comp	R416
	2.7k Ohm, ±10%, 1/2W comp	R417
	470k Ohm, ±10%, 1/2W comp	R418
	330k Ohm, ±10%, 1/2W comp	R419
	1.0 Ohm, ±10%, 2W metal oxide	R422
	270 Ohm, ±5%, 1/4W carbon	R423
	500 Ohm varistor R drive	VR401
	500 Ohm varistor B drive	VR402
	5k Ohm varistor R cutoff	VR403
	5k Ohm varistor G cutoff	VR404
	5k Ohm varistor B cutoff	VR405
	1M Ohm varistor screen	VR406
Capacitors		
	1000 pf, 50V, 10% ceramic	C401
	1000 pf, 50V, 10% ceramic	C402
	1000 pf, 50V, 10% ceramic	C403
	1500 pf, 2kV ±10% ceramic	C404
	100 pf, 12kv, ±10% ceramic	C405

MONITOR 19" VERTICAL - WELLS GARDNER 19K 4675 DRAWING NUMBER 200-0019

Part No.	Description	Ref. Des.
	.01 uf, 500V, ±10% ceramic	C406
	1500 pf, 2kV, ±10% ceramic	C407
	68 pf, 50V, ±10% ceramic	C408
	68 pf, 50V, ±10% ceramic	C409
	68 pf, 50V, ±10% ceramic	C410
Semiconductors		
482-0155	Transistor, 2SC1514 (R output)	TR401
482-0155	Transistor, 2SC1514 (G output)	TR402
482-0155	Transistor, 2SC1514 (B output)	TR403
481-0223	Diode, IS2367 (protector)	X404
481-0223	Diode, IS2367 (protector)	X405
481-0223	Diode, IS2367 (protector)	X406
Miscellaneous		
	Socket, 5 pin	J401
	Socket, 3 pin	J402
	Plug, 5 pin	P401
	Plug, 3 pin	P402
800-3253 High Voltage Assembly (T701)		
	6.8 Ohm, ±10% 15W WW resistor	R701
220-0223	Focus control	VR702
	Diode (SI HV)) Part of T701	X701
	Diode (SI HV)) Part of T701	X702
	Diode (SI HV)) Part of T701	X703

MONITOR 19" VERTICAL - WELLS GARDNER 19K 4675 DRAWING NUMBER 200-0019

Part No.	Description	Ref. Des.
Final Assembly Parts		
200-0020	19VJTP22 pix tube	
800-3254	Assy purity shld/degaussing	
800-3255	Lateral/purity assembly	
200-0066	Yoke, deflection	
213-0021	CRT socket	
800-3253	HV unit (T701)	
	Plug, line cord (K4625, K4675, K4677)	
	Plug, line cord (K4626, K4676)	
180-0021	Degaussing coil (L701)	
	INTERFACE FACE BOARD (P317)	
Resistors		
	91 Ohm ±5%, 12/W carbon	R201
	22k Ohm, ±10%, 1/4W carbon	R202
	1k Ohm, ±5%, 1/2W carbon	R203
	100 Ohm, ±5%, 1/4W carbon	R204
	100k Ohm, ±5%, 1/4W carbon	R205
	330 Ohm, ±10%, 1/2W carbon	R206
	2.2k Ohm, ±5%, 1/4W carbon	R207
	2.2k Ohm, ±5%, 1/4W carbon	R208
	100k Ohm, ±5%, 1/4W carbon	R209
	100 Ohm, ±5%, 1/4W carbon	R210
	220 Ohm, ±5%, 1/4W carbon	R211
	220 Ohm, ±5%, 1/4W carbon	R212

Part No.	Description	Ref. Des.
	220 Ohm, ±5%, 1/4W carbon	R213
	150 Ohm, ±5%, 1/4W carbon	R214
	150 Ohm, ±5%, 1/4W carbon	R215
	150 Ohm, ±5%, 1/4W carbon	R216
	100 Ohm, ±5%, 1/4W carbon	R217
	1k Ohm, ±5%, 1/2W carbon	R218
	1k Ohm, ±5%, 1/2W carbon	R219
	680 Ohm, ±5%, 1/2W carbon	R220
	270 Ohm, ±5%, 1/2W carbon	R221
	270 Ohm, ±5%, 1/2W carbon	R222
	100k Ohm, 5%, 1/4W carbon	R223
	1k Ohm, 5%, 1/2W carbon	R224
	8.2k Ohm, 5%, 1/4W carbon	R225
	8.2k Ohm, 5%, 1/4W carbon	R226
	8.2k Ohm, 5%, 1/4W carbon	R227
	390 Ohm, 5%, 1/2W carbon	R228
	1.5k Ohm black level control	VR201
	10k Ohm horizontal centering	VR202
Capacitors		
	1000 uf, 16V electrolytic	C201
	470 uf, 16V lytic	C202
	.022 uf, 10% 100V	C203
	680 pf, 10%, Z5F	C204
	.01 uf, 10%, 100V	C205

MONITOR 19" VERTICAL - WELLS GARDNER 19K 4675 DRAWING NUMBER 200-0019

Part No.	Description	Ref. Des.
Semiconductors		
482-0030	Transistor (NPN) 2N3904	TR201
482-0030	Transistor (NPN) 2N3904	TR202
482-0030	Transistor (NPN) 2N3904	TR203
482-0289	Transistor (PNP) MPS-A70	TR204
482-0289	Transistor (PNP) MPS-A70	TR205
482-0289	Transistor (PNP) MPS-A70	TR206
482-0030	Transistor (NPN) 2N3904	TR207
482-0030	Transistor (NPN) 2N3904	TR208
482-0030	Transistor (NPN) 2N3904	TR209
482-0030	Transistor (NPN) 2N3904	TR210
481-0224	Diode silicon FDH-444	X201
481-0224	Diode silicon FDH-444	X202
481-0224	Diode silicon FDH-444	X203
481-0224	Diode silicon FDH-444	X204
481-0014	Diode, zener 3.9V, 5%, 0.5W IN5228B	ZD201
Miscellaneous		
	Socket, 6 pin	J201
	Socket, 6 pin	J202
	Plug, 4 pin	P203
	Plug, 3 pin	P204
	Plug, 6 pin	P205

Part No.	Description	Ref. Des.
Resistors		
	91 Ohm, ±5%, 1/2W carbon	R201
	22k Ohm, ±10%, 1/4W carbon	R202
	1k Ohm, ±5%, 1/2W carbon	R203
	100 Ohm, ±5%, 1/4W carbon	R204
	100k Ohm, ±5%, 1/4W carbon	R205
	330 Ohm, ±10%, 1/2W carbon	R206
	2.2k Ohm, ±5%, 1/4W carbon	R207
	2.2k Ohm, ±5%, 1/4W carbon	R208
	100k Ohm, ±5%, 1/4W carbon	R209
	100 Ohm, ±5%, 1/4W carbon	R210
	200 Ohm, ±5%, 1/4W carbon	R211
	200 Ohm, ±5%, 1/4W carbon	R212
	200 Ohm, ±5%, 1/4W carbon	R213
	200 Ohm, ±5%, 1/4W carbon	R214
	200 Ohm, ±5%, 1/4W carbon	R215
	200 Ohm, ±5%, 1/4W carbon	R216
	100 Ohm, ±5%, 1/4W carbon	R217
	1k Ohm, ±5%, 1/2W carbon	R218
	1k Ohm, ±5%, 1/2W carbon	R219
	1k Ohm, 5%, 1/2W carbon	R220
	200 Ohm, 5%, 1/2W carbon	R221
	200 Ohm, 5%, 1/2W carbon	R222
	100k Ohm, 5%, 1/4W carbon	R223

Part No.	Description	Ref. Des.
	680k Ohm, 5%, 1/2W carbon	R224
	8.2k Ohm, 5%, 1/4W carbon	R225
	8.2k Ohm, 5%, 1/4W carbon	R226
	8.2k Ohm, 5%, 1/4W carbon	R227
	390 Ohm, 5%, 12W carbon	R228
	1.5k Ohm black level control	VR201
	10k Ohm horizontal centering	VR202
Capacitors		
	1000 uf, 16V electrolytic	C201
	470 uf, 16V lytic	C202
	.022 uf, 10% 100V	C203
	680 pf, 10%, Z5F	C204
	.01 uf, 10%, 100V	C205
Semiconductors		
482-0030	Transistor (NPN) 2N3904	TR201
482-0030	Transistor (NPN) 2N3904	TR202
482-0030	Transistor (NPN) 2N3904	TR203
482-0289	Transistor (PNP) MPS-A70	TR204
482-0289	Transistor (PNP) MPS-A70	TR205
482-0289	Transistor (PNP) MPS-A70	TR206
482-0030	Transistor (NPN) 2N3904	TR207
482-0030	Transistor (NPN) 2N3904	TR208
	482-0030 Transistor (NPN) 2N3904	TR209
482-0030	Transistor (NPN) 2N3904	TR210

Part No.	Description	Ref. Des.
481-0224	Diode silicon FDH-444	X201
481-0224	Diode silicon FDH-444	X202
481-0224	Diode silicon FDH-444	X203
481-0224	Diode silicon FDH-444	Xw04
481-0014	Diode, zener 3.9V, 5%, 0.5W IN5228B	ZD201
Miscellaneous		
	Socket, 6 pin	J201
	Socket, 6 pin	J202
	Plug, 4 pin	P203
	Plug, 3 pin	P204
	Plug, 6 pin	P205

OUTSIDE OF THE PCB ASSY

Part No.	Description	Ref. Des.
200-0667	Picture tube 19"	
200-0068	Deflection yoke	
113-0009	PC magnet	
560-0096	Flyback trans.	
	HVR	
	UNF resistor 220 Ohm, 25W K	R05
	C capacitor 150pf, AC1.5KV	C04
482-0198	Si. transistor, 2SD870	X01
482-0143	Si. transistor, 2SC1106A	X02
	Screw #8 3/8	
	Screw 1/4 x 3/4 pix tube mtg (4)	
	Pyramidal lock washer (4)	
	Nut retainer, pix tube mtg (4)	
	Clip--PCB support	
	Standoff	
	Wire terminal (gnd strap)	
	Terminal lug (gnd)	
	Groundstrap assy	
	Grounding spring	
	Wire hook (gnd strap)	
	Purity shield holddown clamp	
	Support brkt RH	
	Support brkt LH	

MONITOR 19" VERTICAL - ELECTROHOME 607-907 DRAWING NUMBER 200-0022

Part No.	Description			Ref. Des.
	Chassis base			
	Yoke wedge (3)			
	PURITY SHIELD ASSY			
180-0022	Degaussing coil			D911,D912
481-0225	Rectifier 1 amp 600 V (2)			
	Pin terminal (2)			
	Pin terminal housing			
	Purity shield (2 pcs)			
	Purity shield (2 pcs)			
	Capacitor 100nf 10% 400V			C911
	Resistor, wirewound 33 Ohm, 4W			R921
	Fire retardent term strip 4 lug			
	CRT SOCKET PCB ASSY			
	V	R	200	R105
	V	R	200	R106
	V	R	5K	R113
	V	R	5K	R114
	V	R	5K	R115
	OM	R	10K Ohm 2W J	R116
	OM	R	10K Ohm 2W J	R117
	OM	R	10K Ohm 2W J	R118
	Comp	R	3.3K Ohm 1/2W K	R119
	Comp	R	3.3K Ohm 1/2W K	R120
	Comp	R	3.3K Ohm 1/2W K	R121

Part No.	Description	Ref. Des.
Capacitors		
	E Cap 10uf 250V A	C107
	C Cap 1000pf DC1400V P	C108
Coils		
180-0023	Peaking coil	L101
Semiconductors		
482-0290	Si transistor, 2SC1514VC	X101
482-0290	Si transistor, 2SC1514VC	X102
482-0290	Si transistor, 2SC1514VC	X103
Miscellaneous		
213-0022	CRT socket	

MAIN PCB ASSY

Resistors		
	V R 200 Ohm	R406
	V R 200 Ohm	R408
	CMF R 6.8 Ohm 1W J	R410
	OM R 3.3K Ohm 1W J	R414
	OM R 2.7K Ohm 1W J	R415
	OM R 12K Ohm 2W J	R421
	V R 10K Ohm	R422
	F R 68 Ohm 2W K	FR401
	CMF R 11.8K Ohm 1/4W +1%	R503
	V R 5K Ohm	R504
	OM R 10K Ohm 2W J	R509
	OM R 8.2K Ohm 2W J	R512

Part No.	Description	Ref. Des.
	OM R 820 Ohm 2W J	R514
	CMF R 8.2 Ohm 1W J	R515
	CMF R 4.7 Ohm 1W J	R522
	OM R 68 Ohm 2W J	R523
	OM R 390 Ohm 1W J	R528
	ZN R 470 Ohm	R534
	ZN R	VR501
	CMF R 39 Ohm 1/2W + 1%	R703
	CMF R 7.68K Ohm 1/4W + 1%	R704
	Posistor	R901
	UNF R 2 Ohm 7W K	R902
	CMF R 4.7 Ohm 3W J	R903
	OM R 10K Ohm 2W J	R904
	OM R 18K Ohm 1W J	R905
	CMF R 47 Ohm 1/2W + 1%	Q908
	V R 2K Ohm	R909
	CMF R 2.74K Ohm 1/4W + 1%	R910
	F R 220 Ohm 1/2W K	FR901
Capacitors		
	BPE Cap 3.3uf 50V A	C301
	Tan cap 2.2uf 16V K	C402
	E cap 4.7uf 6.3V A	C407
	E cap 100uf 160V A	C411
	E cap 3.3uf 160V A	C412

Part No.	Description	Ref. Des.
	PP cap 5600uf 50V J	C508
	PP cap 2000pf DC1500V J	C512
	PP cap 2000pf DC1500V J	C513
	PP cap 2000pf DC1500V J	C514
	PP cap 0.53uf DC1200V J	C515
	BPE cap 3.3uf 50V A	C520
	E cap 1uf 160V A	C523
	M cap 0.1uf 200V K	C524
	PP cap 2000pf DC1500V J	C531
	PP cap 1500pf DC1500V J	C532
	E cap	C904
	E cap 10uf 250V A	C905
Coils		
180-0024	Linarity coil	L502
181-0031	Width coil	L503
180-0025	Heater choke	L504
Transformers		
560-0061	Hor drive transf	T501
560-0097	Side pin transf	T503
Semiconductors		
316-0807	IC HA11244	IC501
482-0177	Si transistor, 2SC1685(R)	X101
482-0111	Si transistor, 2SA673(C)	X102
482-0177	Si transistor, 2SC1685(R)	X103

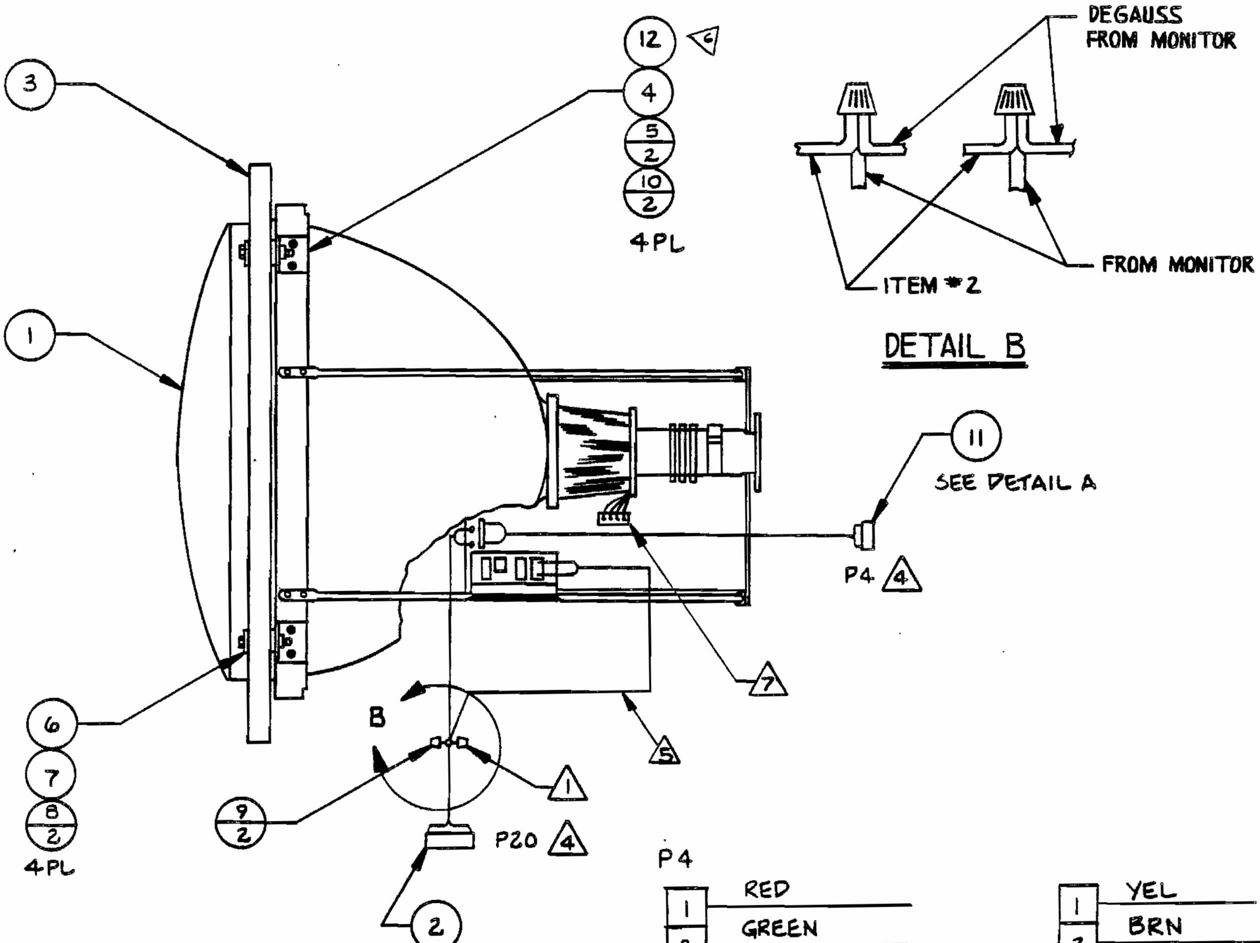
Part No.	Description	Ref. Des.
482-0111	Si transistor, 2SA673(C)	X104
482-0177	Si transistor, 2SC1685(R)	X105
482-0111	Si transistor, 2SA673(C)	X106
482-0177	Si transistor, 2SC1685(R)	X301
482-0177	Si transistor, 2SC1685(R)	X302
482-0111	Si transistor, 2SA673(C)	X303
482-0177	Si transistor, 2SC1685(R)	X304
482-0177	Si transistor, 2SC1685(R)	X305
482-0196	Si transistor, 2SD478	X401
482-0196	Si transistor, 2SD478	X402
482-0291	Si transistor, 2SC2610BK	X501
482-0257	Si transistor, 2SC2688 (KLM)	X901
482-0258	Si transistor, 2SC1890A (EF)	X902
481-0226	Si diode, W06A	D101
481-0226	Si diode, W06A	D102
481-0226	Si diode, W06A	D103
481-0149	Si diode, 1SZ473H	D301
481-0149	Si diode, 1SZ473H	D401
481-0227	Zener diode, RD10F(C)	D402
481-0171	Si diode, HF-1	D503
481-0228	Si diode, V09E	D504
481-0229	Zener diode, RD11E(B)	D505
481-0226	Si diode, W06A	D506
481-0230	Si diode, 1SS81	D507

Part No.	Description	Ref. Des.
481-0149	Si diode, 1SZ473H	D508
481-0231	Zener diode, RD20EV2	D701
481-0160	Si diode, 1S1887A	D901
481-0160	Si diode, 1S1887A	D902
481-0160	Si diode, 1S1887A	D903
481-0160	Si diode, 1S1887A	D904
481-0198	Zener diode, RD6.8EV3	D905
Miscellaneous		
	Fuse 1.25A	F901
	US fuse 3A	F902

ASSEMBLY MONITOR NANAO DRAWING NUMBER 800-0363

Item No.	Part No.	Qty. Req'd.	Description
1	200-0039	1	19" nanao monitor
2	800-0324	1	Assy harness power monitor
3	252-0175	1	Monitor mounting board
4	250-0515	4	Bracket nanao monitor
5	288-0005-10	8	SCR metric - M5 x 10 pan hd phillips
6	282-0017-20	4	Bolt hex hd mach 1/4 - 20 x 1 1/4
7	283-0007-00	4	Nut hex 1/4 - 20 nylon locking
8	284-0027-16	8	Washer, fender 1/4, 1.00 O.D.
9	280-0359	2	Crimp, electrical sleeve
10	284-0036-00	8	Lock, split, steel #10
11	211-0046	1	Conn cap 6 pin
12	284-0017-00	4	Washer flat small O.D. stl #1/4

Assembly 19″ Nanao Monitor 800-0363



P4

Pin	Wire
1	RED
2	GREEN
3	BLUE
4	WHITE
5	BLUE/WHITE
6	

DETAIL A

Pin	Wire
1	YEL
2	BRN
3	RED
4	BLU

DETAIL C

PCB ASSEMBLY

Part No.	Description	Ref. Des.
Resistors	R carbon 1/4 sb 680 Ohm	R101
	R carbon 1/4 sb 680 Ohm	R102
	R carbon 1/4 sb 2.2K Ohm	R103
	R carbon 1/4 sb 390 Ohm	R104
	R carbon 1/4 sb 2.2K Ohm	R105
	R carbon 1/4 sb 390 Ohm	R106
	R carbon 1/4 sb 1K Ohm	R107
	R carbon 1/4 sb 680 Ohm	R111
	R carbon 1/4 sb 680 Ohm	R112
	R carbon 1/4 sb 15K Ohm	R113
	R carbon 1/4 sb 390 Ohm	R114
	R carbon 1/4 sb 2.2K Ohm	R115
	R carbon 1/4 sb 390 Ohm	R116
	R carbon 1/4 sb 1K Ohm	R117
	R carbon 1/4 sb 680 Ohm	R121
	R carbon 1/4 sb 680 Ohm	R122
	R carbon 1/4 sb 390 Ohm	R124
	R carbon 1/4 sb 2.2K Ohm	R125
	R carbon 1/4 sb 390 Ohm	R126
	R carbon 1/4 sb 1K Ohm	R127
	R carbon 1/4 sb 10K Ohm	R401
	R carbon 1/4 sb 8.2K Ohm	R402

Part No.	Description	Ref. Des.
	R carbon 1/4 sb 3.3K Ohm	R403
	R carbon 1/4 sb 8.2K Ohm	R404
	R carbon 1/2 sb 270 Ohm	R405
	R carbon 1/4 sb 10K Ohm	R406
	R carbon 1/4 sb 680 Ohm	R407
	R carbon 1/4 sb 2.2K Ohm	R408
	R carbon 1/4 sb 12K Ohm	R409
	R carbon 1/4 sb 10K Ohm	R410
	R fuseble fmr1/4w 100 Ohm	R413
	R carbon 1/4 sb 2.2K Ohm	R414
	R metal 10K Ohm	R415
	R fuseble FMRL/4C 22Ohm	R416
	R cement RGBIOH(V) 220 Ohm	R417
	R metal 4.7K Ohm	R418
	R carbon 1/2 sb 2.2K Ohm	R419
	R carbon 1/4 sb 68K Ohm	R421
	R carbon 1/4 sb 6.8 Ohm	R422
	R carbon 1/4 sb 470 Ohm	R423
	R fuseble FMR1/4W	R424
	R carbon 1/2 sb 390 Ohm	R425
	R carbon 1/4 sb 6.8K Ohm	R426
	R fuseble FMR1/2W 1.2 Ohm	R427
	R fuseble FMR2W 1.2 Ohm	R428
	R carbon 1/4 sb 330 Ohm	R501

Part No.	Description	Ref. Des.
	R carbon 1/4 sb 10K Ohm	R502
	R carbon 1/4 sb 10K Ohm	R504
	R carbon 1/4 sb 27K Ohm	R505
	R carbon 1/4 sb 390K Ohm	R506
	R carbon 1/4 sb 18K Ohm	R507
	R carbon 1/4 sb 68K Ohm	R508
	R carbon 1/4 sb 6.8K Ohm	R509
	R carbon 1/4 sb 10K Ohm	R510
	R carbon 1/4 sb 1.2K Ohm	R511
	R carbon 1/4 sb 470 Ohm	R512
	R metal RNL1/4 3.3K Ohm	R513
	R metal RNL1/4 560K Ohm	R514
	R metal 6.8K Ohm	R515
	R carbon 1/2 sb 8.2K Ohm	R516
	R metal 3.3K Ohm	R517
	R carbon 1/4 sb 8.2K Ohm	R518
	R carbon 1/2 sb 4.7K Ohm	R519
	R carbon 1/2 sb 33 Ohm	R520
	R carbon 1/4 sb 10K Ohm	R521
	R fuseble FMR1/4W 330 Ohm	R522
	R fuseble FMR1/4W 330 Ohm	R523
	R fuseble FMR1/4W 330 Ohm	R524
	R fuseble FMR1/2W 4.7 Ohm	R525
	R carbon 1/4 sb 22K Ohm	R527

Part No.	Description	Ref. Des.
	R carbon 1/4 sb 22K Ohm	R528
	R carbon 1/4 sb 680 Ohm	R529
	R carbon 1/4 sb 4.7K Ohm	R530
	R carbon 1/4 sb 470 Ohm	R531
	R carbon 1/4 sb 680 Ohm	R532
	R carbon 1/4 sb 47 Ohm	R533
	R fuseble FMR1/4W 330 Ohm	R901
	R carbon 1/4 sb 47K Ohm	R902
	R fuseble FMR1/4W 68 Ohm	R903
	R metal 15K Ohm	R904
	R carbon 1/4 sb 1M Ohm	R905
	R carbon 1/4 sb 15K Ohm	R906
	R carbon 1/4 sb 68K Ohm	R907
	R carbon 1/4 sb 68K Ohm	R908
	R carbon 1/4 sb 4.7K Ohm	R909
	R variable V8K4-1 5K Ohm	RV101
	R variable V8K4-1 5K Ohm	RV102
	R variable V8K4-1 5K Ohm	RV103
	R variable V8K4-1 5K Ohm	RV104
	R variable RVA0911H320-7-502M	RV404
	R variable RVG0911H320-7-303M	RV402
	R variable RVA0911H320-7-501M	RV403
	R variable RVA0911H320-7-302M	RV501
	R variable RVG0911H320-7-303M	RV502
	R variable RVG0911H320-7-303M	RV503

Part No.	Description	Ref. Des.
	R semifixed V8K4-1 3K Ohm	R910
Capacitors		
	C electro CE04 16V100(M)	C101
	C electro CE04 50V 1(M)	C401
	C polyester DEP50V 333K	C402
	C polyester DEP50V 333K	C403
	C tantal D 16V 2.2 uf K	C404
	C ceramic DD104-63B561K50V	C405
	C electro CE04 16V 470 (M)	C406
	C electro CE04 25V 10(M)	C407
	C tantal D 25 10 uf K	C408
	C electro CE04 100V 10 (M)	C409
	C electro CE04 50V 1 (M)	C410
	C electro CE04 35V 220 (M)	C411
	C electro CE04 63V 470 (M)	C412
	C electro CE04 16V 470 (M)	C413
	C electro CE04 25V 10 (M)	C414
	C ceramic DD09-63B222K500V	C415
	C electro CE04 100V 10 (M)	C416
	C electro CE04 35V 220 (M)	C417
	C electro CE04 160V 22 (M)	C418
	C ceramic DD09-63B222K500V	C419
	C electro CE04 25V 10 (M)	C501

Part No.	Description	Ref. Des.
	C electro CE04 25V 10 (M)	C502
	C electro CE04 50V 1 (M)	C503
	C ceramic DD105-63E222P50V	C504
	C electro CE04 50V 1 (M)	C505
	C polyester DEP50V 473K	C506
	C polyester DEP 50V 473K	C507
	C polypro DTW100V 562-G	C508
	C electro CE04 50V 1 (M)	C510
	C electro CE04 16V 220 (M)	C511
	C ceramic DD05-63B561K500V	C512
	C ceramic DD10 63E472P500V	C513
	C ceramic DE1510R 222K	C514
	C ceramic DE1510R 222K	C515
	C ceramic DE1410R 182K	C516
	C ceramic DE1110R 821 K	C517
	C ceramic DD104-63B821K 50V	C518
	C polipro DTW200VDC 0.47uf M	C520
	C electro CE04 50V 47 (M)	C523
	C electro CE04 160V 47 (M)	C524
	C ceramic DD09-63B222K500V	C525
	C electro CE04 160V 1 (M)	C526
	C electro CE04 160V 10 (M)	C527
	C poripro DTW630VDC 0.01uf - M	C528
	C electro CE04 25V 10 (M)	C529

Part No.	Description	Ref. Des.
	C polypro UL LHX125VAC 0.1uf	C901
	C ceramic MVDE0807E222ZAC250V	C902
	C ceramic MVDE0807E222ZAC250V	C903
	C ceramic DD09-63B 22K 500V	C904
	C electro RPE 180V (30ø) 680 (M)	C905
	C electro CE04 160V 22 (M)	C906
	C ceramic DD05-63B 221K 500V	C907
Coils		
180-0033	L choke	L401
181-0034	L choke	L501
180-0032	L choke	L502
181-0033	L linear	L503
181-0032	L size	L504
180-0031	L choke	L505
180-0030	L choke	L506
180-0029	L choke	L507
180-0028	L choke	L901
180-0027	L choke	L902
180-0026	L choke	L903
Transformers		
560-0102	T H drive	T501
560-0101	T pin corr	T502
560-0100	T FBT MSH1FAC02	T503

Part No.	Description	Ref. Des.
Diodes		
481-0164	Diode 1S1588	D101
481-0164	Diode 1S1588	D102
481-0164	Diode 1S1588	D103
481-0164	Diode 1S1588	D104
481-0164	Diode 1S1588	D105
481-0164	Diode 1S1588	D106
481-0164	Diode 1S1588	D401
481-0234	Diode 1S1886	D402
481-0175	Diode 1S2076A	D403
481-0119	Diode RU2	D404
481-0233	Diode EQA01-24	D405
481-0164	Diode 1S1588	D501
481-0137	D zener EQA01-07S	D502
481-0164	Diode 1S1588	D504
481-0175	Diode 1S2076A	D505
481-0175	Diode 1S2067A	D506
481-0119	Diode RU2	D507
481-0232	Diode S5295G	D508
481-0164	Diode 1S1588	D509
481-0232	Diode S5295G	D510
481-0164	Diode 1S1588	D511
481-0137	Diode EQA01-07S	D512
481-0235	D bridge 3D4B41	D901

Part No.	Description	Ref. Des.
481-0119	Diode RU2	D902
481-0137	D zener EQA01-07S	D904
481-0137	D zener EQA01-07S	D905
Transistors		
482-0261	Transistor 2SC1740	Q101
482-0261	Transistor 2SC1740	Q102
482-0261	Transistor 2SC1740	Q103
482-0261	Transistor 2SC1740	Q104
482-0261	Transistor 2SC1740	Q105
482-0261	Transistor 2SC1740	Q106
482-0111	Transistor 2SA673	Q107
Miscellaneous		
	Connector	CN201
	Connector	CN202
	Connector	CN203
	Assy accord	CD901
	Connector	CN901
510-0068	Switch SSA042	SW1
510-0068	Switch SSA042	SW2
	Pin terminal	TP1
	Pin terminal	TP2
	Pin terminal	TP3
	Pin terminal	TP4

Part No.	Description	Ref. Des.
Transistors		
482-0276	Transistor 2SD1138	Q401
482-0276	Transistor 2SD1138	Q402
482-0261	Transistor 2SC1740	Q501
482-0257	Transistor 2SC2688	Q502
482-0198	Transistor 2SD870	Q503
482-0201	Transistor 2SD763	Q504
482-0201	Transistor 2SD763	Q505
882-0111	Transistor 2SA673	Q506
482-0111	Transistor 2SA673	Q507
	Transistor 2SC2555	Q901
482-0273	Transistor 2SA1091	Q902
482-0167	Transistor 2SC2482	Q903
882-0167	Transistor 2SC2482	Q904
Miscellaneous		
313-0051	I C HA11235	IC401
	Connector	CN101
	Connector	CN102
	Fuse	F901
	Fuse clip	CF901
	Fuse	
	Fuse clip	
	Shield case	
560-0098	Assy tr (v-out)	

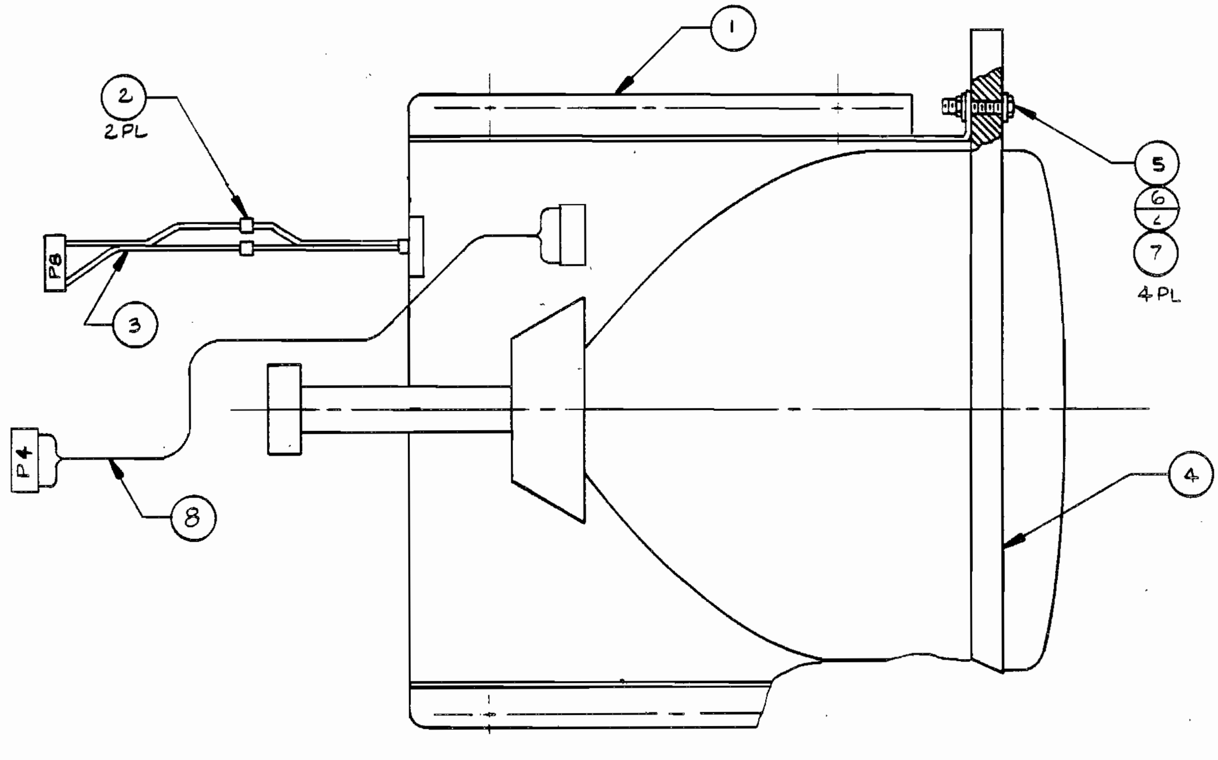
Part No.	Description	Ref. Des.
560-0099	Assy tr (h-out)	
800-3256	Assy radiator A	
	NECK BOARD PCB	
Resistors		
	R carbon 1/4 sb 220 Ohm	R301
	R carbon 1/4 sb 220 Ohm	R302
	R carbon 1/4 sb 220 Ohm	R303
	R carbon 1/4 sb 1.2K Ohm	R304
	R carbon 1/4 sb 1.2K Ohm	R305
	R carbon 1/4 sb 1.2K Ohm	R306
	R carbon 1/4 sb 330 Ohm	R307
	R carbon 1/4 sb 330 Ohm	R308
	R carbon 1/4 sb 330 Ohm	R309
	R metal 8.2K Ohm	R310
	R metal 8.2K Ohm	R311
	R metal 8.2K Ohm	R312
	R solid 1/2 2.2K Ohm	R313
	R solid 1/2 2.2K Ohm	R314
	R solid 1/2 2.2K Ohm	R315
	R solid 1/2 1M Ohm	R316
	R variable RVA0911H-306-1 5K Ohm	RV301
	R variable RVA0911H-306-2 5K Ohm	RV302
	R variable RVA0911H-306-3 5K Ohm	RV303
	R variable RVA0911H-306-7 220 Ohm	RV304

Part No.	Description	Ref. Des.
	R variable RVA0911H-306-7 220 Ohm	RV305
Capacitors		
	C ceramic DD104-63B 271K 50V	C304
	C ceramic DD104-63B 271K 50V	C305
	C ceramic DD104-63B 271K 50V	C306
	C ceramic DE0705-B 102K 1KV	C309
Transistors		
482-0257	Transistor 2SC2688	Q301
482-0257	Transistor 2SC2688	Q302
482-0257	Transistor 2SC2688	Q303

ASSEMBLY MONITOR COLOR DRAWING NUMBER 800-0368

Item No.	Part No.	Qty. Req'd.	Description
1	200-0014	1	Color monitor 19" horizontal
2	280-0359	2	Electric crimp sleeve
3	800-0369	1	Assy harness AC "Z"
4	252-0175	1	Monitor mounting board
5	282-0017-24	4	Hex head bolt 1/4 - 20 x 1.500 lg
6	284-0027-16	8	Flat washer, large O.D. steel 1/4
7	283-0007-00	4	Nut hex, self-locking, mach 10-24
8	800-0361	1	Assy harn video intf

Assembly Color Monitor 800-0368

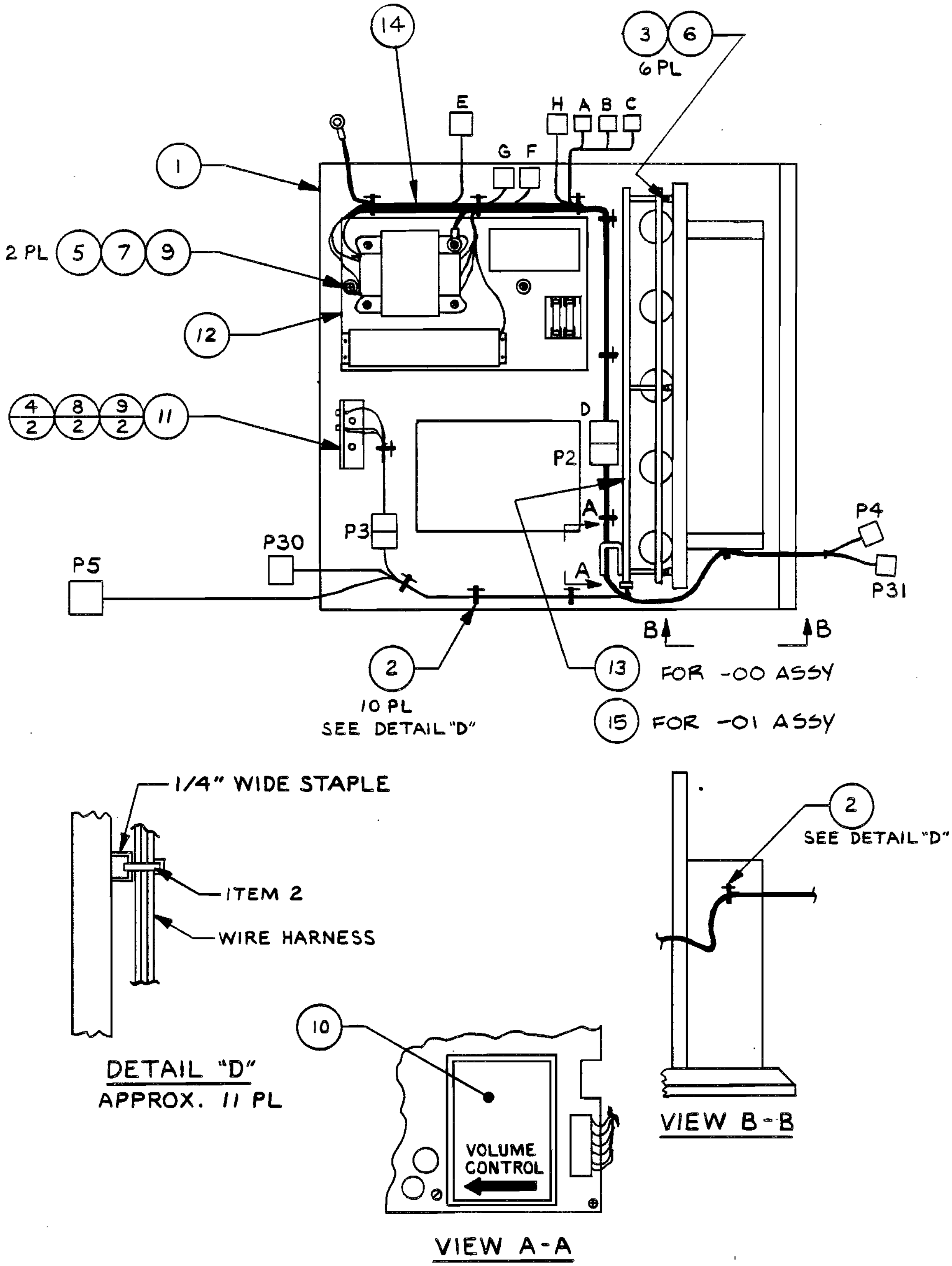


ASSEMBLY COMPONENT SHELF DRAWING NUMBER 800-3243-00

ASSEMBLY COMPONENT SHELF DRAWING NUMBER 800-3243-01

Item No.	Part No.	Qty. Req'd.		Description
		-01	-00	
1	252-0177	1	1	Component shelf
2	280-0005	11	11	Cable tie
3	281-0042-12	6	6	SCR PN HD Phil type A/AB #6-18 x 1"
4	281-0045-12	2	2	SCR PN HD Phil S/M type A/AB #10-12 x .750 lg
5	281-0045-20	2	2	SCR PN HD Phil S/M type A/AB #10-12 x 1.250 lg
6	284-0002-00	6	6	Washer flat std O.D. stl #6
7	284-0006-00	2	2	Washer flat std O.D. stl #10
8	284-0016-00	2	2	Washer flat SM O.D. stl #10
9	284-0036-00	4	4	Washer lock split stl #10
10	420-0726	1	1	Decal vol control
11	800-0364	1	1	Assy operator control block univ
12	800-0367	1	1	Assy power supply
13	834-0213	--	1	Assy IC board ZAXXON
14	800-3239	1	1	Assy master harness
15	834-0256	1	--	Assy IC board ZAXXON

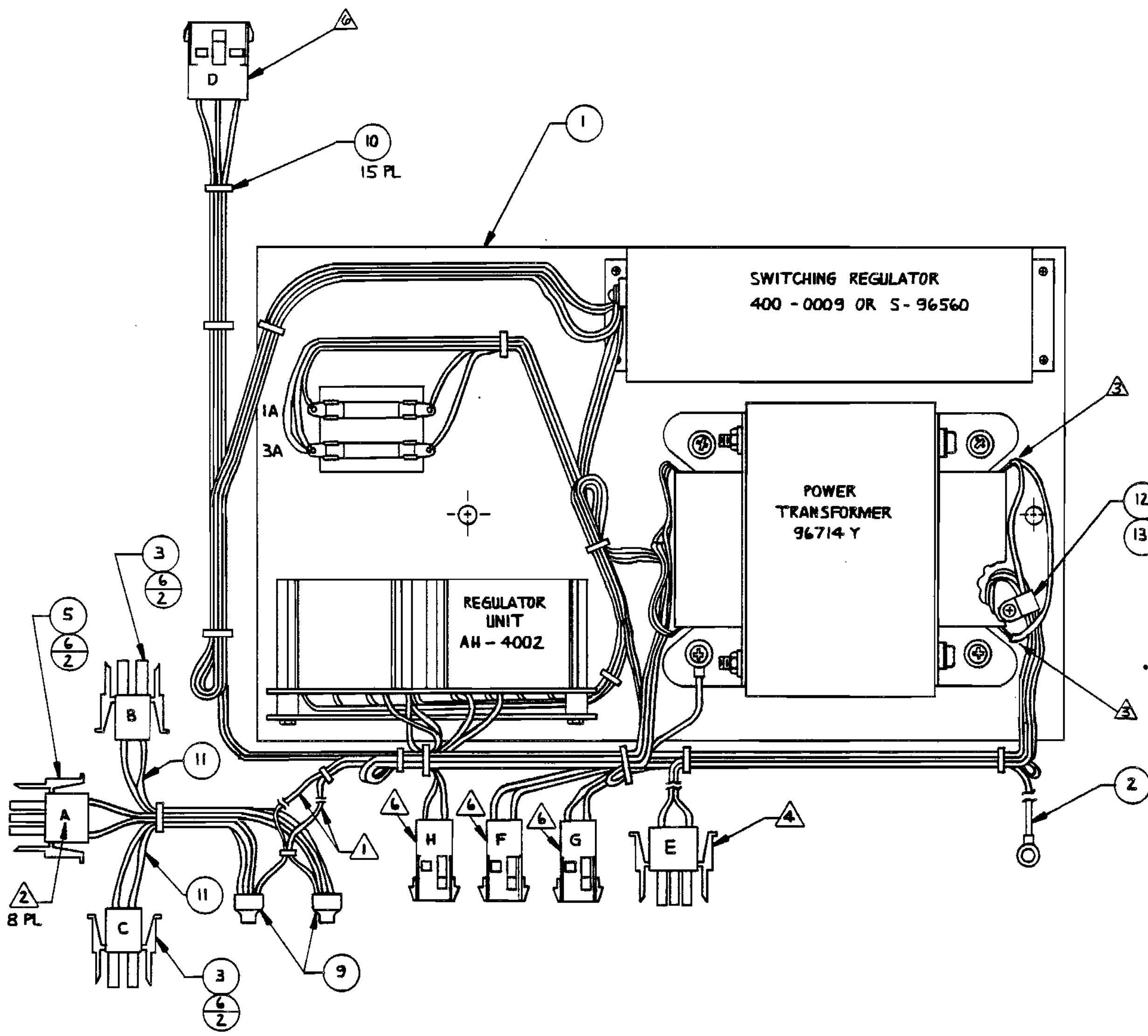
Assembly Component Shelf **800-3243**



ASSEMBLY POWER SUPPLY DRAWING NUMBER 800-0367

Item No.	Part No.	Qty. Req'd.	Description
1	834-0070	1	Power supply assy (Sega FR-4100)
2	800-0370	1	Assy ground strap
3	211-0043	2	Conn plug amp 2 pin
4			
5	211-0059	1	Conn plug amp 3 pin
6	211-0042	6	Conn socket
7	211-0047	1	Conn cap amp 12 pin
8	211-0041	9	Conn pin amp
9	280-0359	4	Electric crimp sleeve
10	280-0005	3	Cable tie
11	600-0079	1.3'	2-cond zip cord

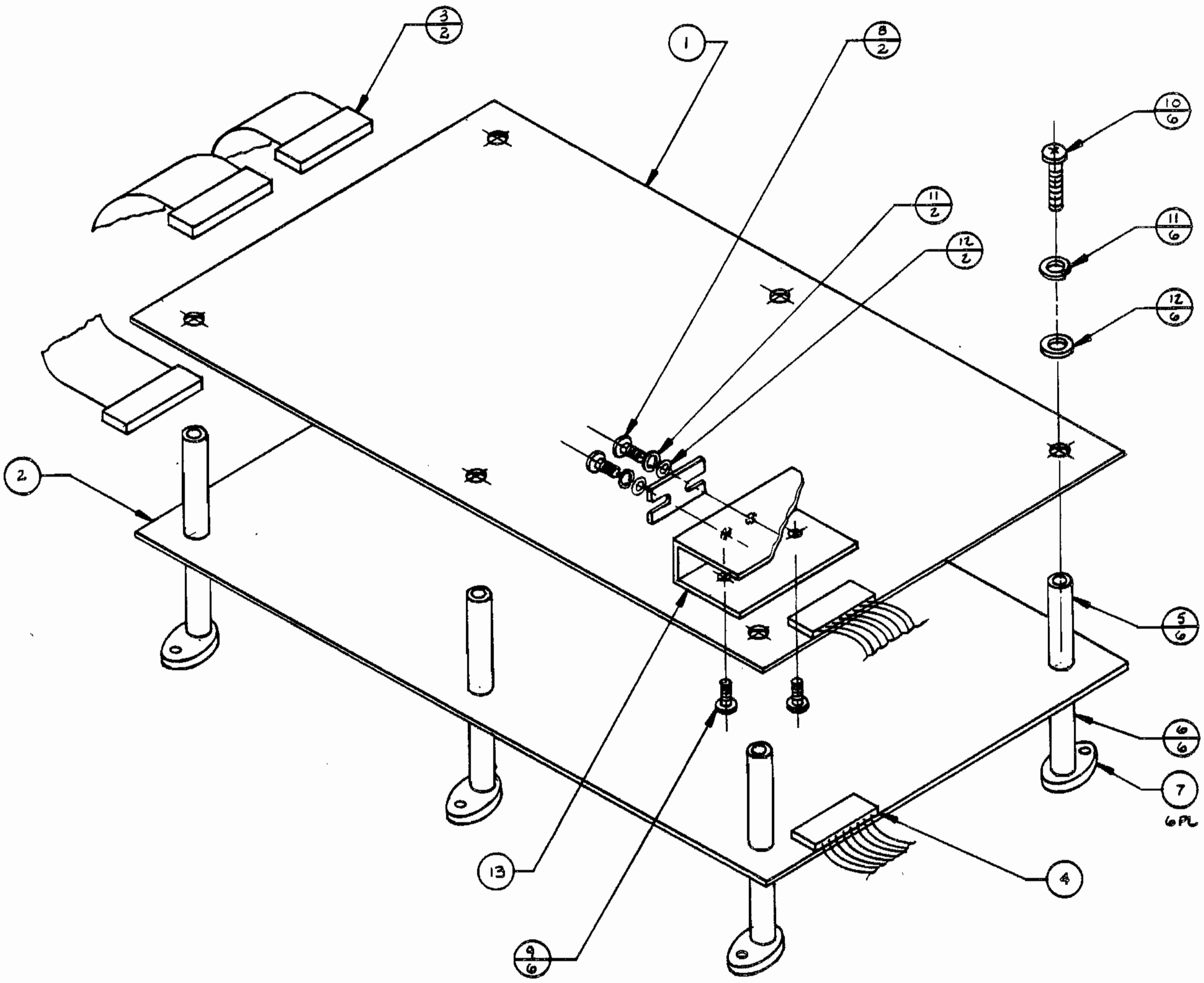
Assembly Power Supply 800-0367



ASSEMBLY GAME ELECTRONICS DRAWING NUMBER 834-0213

Item No.	Part No.	Qty. Req'd.	Description
1	834-0214	1	IC board assy ZAXXON A
2	834-0211	1	IC board assy ZAXXON B
3	600-0114	2	Cable flat and plug assy 50P
4	834-0298	1	Harn inter connect
5	280-0436	6	Spacer x 15 mm lg
6	280-0435	6	Spacer x 6 mm lg
7	280-0372	6	PCB mounting foot
8	288-0003-10	2	SCR metric M3 x 10 pan hd phil
9	288-0003-6	2	SCR metric M3 x 6 pan hd phil
10	288-0003-35	6	SCR metric M3 x 35 pan hd phil
11	288-0061-00	8	M3 lock spring washer
12	288-0051-07	8	M3 flat washer
13	530-0027	1	Heat sink ZAXXON

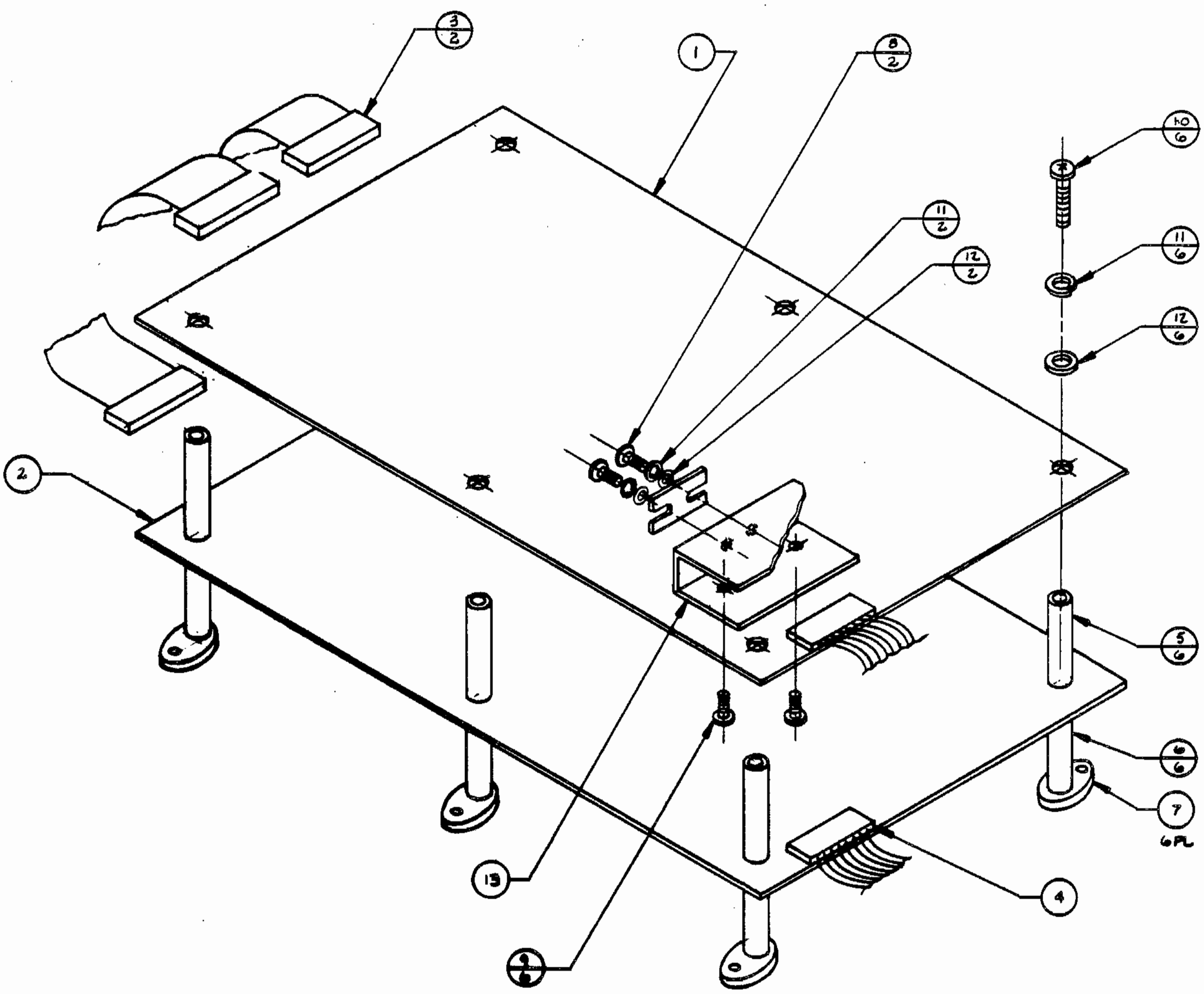
Assembly Game Electronics 834-0213



ASSEMBLY GAME ELECTRONICS DRAWING NUMBER 834-0256

Item No.	Part No.	Qty. Req'd.	Description
1	834-0214	1	IC board assy ZAXXON A
2	834-0257	1	IC board assy ZAXXON B
3	600-0114	2	Cable flat and plug assy 50P
4	834-0298	1	Harn inter connect
5	280-0436	6	Spacer x 15 mm lg
6	280-0435	6	Spacer x 6 mm lg
7	280-0372	6	PCB mounting foot
8	288-0003-10	2	SCR metric M3 x 10 pan hd phil
9	288-0003-6	2	SCR metric M3 x 6 pan hd phil
10	288-0003-35	6	SCR metric M3 x 35 pan hd phil
11	288-0061-00	8	M3 lock spring washer
12	288-0051-07	8	M3 flat washer
13	530-0027	1	Heat sink ZAXXON

Assembly Game Electronics 834-0256



ASSEMBLY IC BOARD A

DRAWING NUMBER 834-0214

Item No.	Part No.	Qty. Req'd.	Description	Ref. Des.
1	150-0227	1	Cap E 4.7 mf 35V	C84
2	150-009	12	Cap E 1 mf 50V	C14-C24,C44
3	150-0010	2	Cap E 100 mf 16V	C36,C37
4	150-0015	1	Cap E 22 mf 16 V	C51
5	150-0023	6	Cap E 10 mf 16V	C47,C66,C67,C83,C106, C108
6	150-0100	13	Con 2.2 mf 50V elect	C28,C29,C32,C38,C41, C55,C59,C68,C69,C74, C76,C80,C93
7				
8	150-0160	8	Cap 470 mf 16V	C1-C6,C100,C101
9	150-0168	1	Cap 1000 mf 16V	C7
10	150-0185	3	Cap 47 mf 16V	C8,C9,C85
11	151-0002	3	Cap cer 100 pf 50V	C126-C128
12	151-0005	7	Cap cer 680 pf 50V	C33,C42,C52,C75,C77, C86,C94
13	151-0012	3	Cap cer .1 mf 50V	C65,C102,C103
14	151-0020	2	Cap cer 33 pf 50V	C130,C131
15	151-0043	3	Con 220 pf 50V cer	C129,C132,C135
16	151-0073	86	Cap cer .047 mf 25V	C104,C107,C109-C125, C133,C134,C136,C139-C202
17	152-0031	1	Con 0.1 mf 50V film	C97
18	152-0079	2	Cap .022 mf 50V	C50,C137
19	152-0033	12	Con .01 mf 50V film	C12,C26,C27,C45,C54, C58,C81,C82,C98,C99, C138,C105
20	152-0035	4	Con .033 mf 50V film	C10,C11,C70,C71

ASSEMBLY IC BOARD A DRAWING NUMBER 834-0214

Item No.	Part No.	Qty. Req'd.	Description	Ref. Des.
21	152-0038	3	Con .047 mf 35/50V film	C72,C73,C88
22	152-0045	2	Con .0022 mf 50V film	C30,C31
23	152-0058	2	Cap .0033 mf 50V	C39,C40
24	152-0075	1	Cap 1000 pf 50V	C92
25	153-0026	1	Cap 22 mf 16V tant	C64
26	153-0030	2	Cap 6.8 mf 16V	C43,C79
27	153-0032	5	Cap 15 mf 16V	C13,C25,C48,C49,C91
28	153-0038	3	Cap 0.68 mf 16V	C34,C35,C89
29	153-0050	1	Cap 33 mf 16V	C46
30	153-0058	2	Cap 2.2 mf 16V	C61,C87
31	153-0066	3	Cap 10 mf 16V	C53,C95,C96
32	153-0065	4	Cap 3.3 mf 16V	C56,C57,C62,C90
33	153-0070	3	Cap 1 mf 16V tant	C60,C63,C78
34	171-0078	1	Printed bd 7 seg dispenser	
35	211-0168	4	Conn pin test pt	TP1,TP2,TP3,TP4
36	212-0098	1	Conn male 10 pin rt angle	P1
37	212-0133	2	Conn male 50 pin	P2,P3
38	212-0150	1	Conn male 6 pin	P4
39	213-0001	3	Skt 24 pin dual in line	UX29,UX68,UX69
40	213-0004	1	Skt 16 pin dual in line	UX72
41	213-0005	1	Skt 40 pin dual in line	UX24

Item No.	Part No.	Qty. Req'd.	Description	Ref. Des.
42	213-008	1	Skt 20 pin DP dual in line	UX98
43	213-0012	2	Skt 28 pin dual in line	UX27, UX28
44	220-0218	1	Vol cont 20K Ohm sm-f	VR1
45	313-0022	1	IC LM/NE 556	U50
46	313-0034	10	IC LM 324 M/C	U3-U5,U8-U12,U19,U20
47	313-0084	4	IC MB 4391M	U13-U16
48	313-0097	1	IC LA4460	U1
49	313-0110	1	IC MB3761	U52
50	314-0001	3	IC NE555 DIP	U6,U7,U18
51	314-0016	4	IC 74123	U21,U22,U45,U46
52	314-0019	6	IC 74LS04	U25,U42,U44,U60,U94, U101
53	314-0030	1	IC 74393	U49
54	314-0031	1	IC 7426	U67
55	314-0051	1	IC 7417	U31
56	314-0055	3	IC 74LS244	U34,U39,U95
57	314-0056	1	IC 74LS132	U53
58	314-0058	1	IC 74LS08	U54
59	314-0059	1	IC 74LS10N	U84
60	314-0062	3	IC 74LS74	U51,U78,U89
61	314-0066	1	IC 74LS27	U99
62	314-0067	2	IC 74LS30	U61,U77
63	314-0068	3	IC 74LS32	U62,U63,U80

ASSEMBLY IC BOARD A DRAWING NUMBER 834-0214

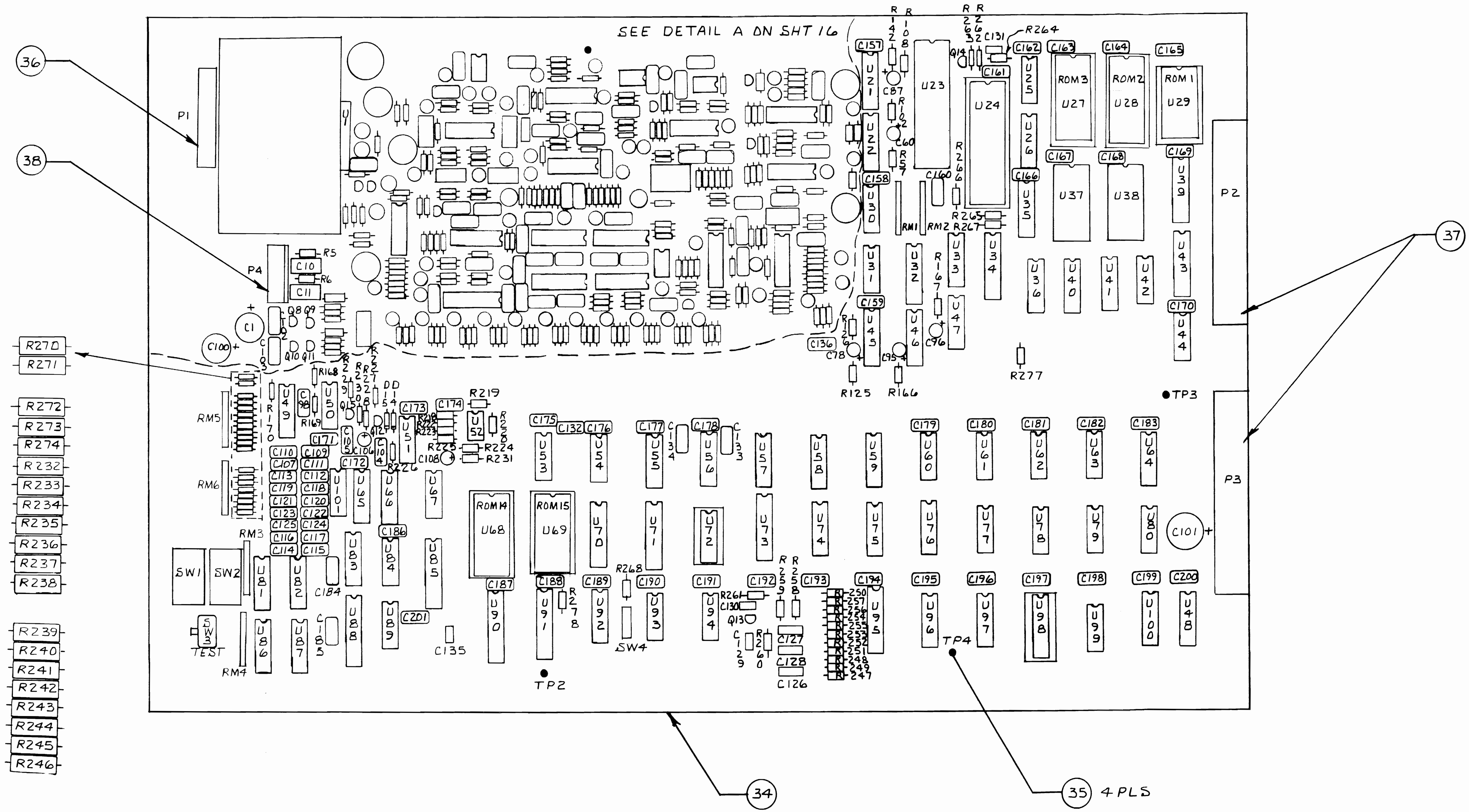
Item No.	Part No.	Qty. Req'd.	Description	Ref. Des.
64	314-0070	1	IC 74LS86	U93
65	314-0072	2	IC 74LS174	U96,U97
66	314-0073	6	IC 74LS175	U36,U40,U41,U65,U66, U83
67	314-0076	6	IC 74LS157	U48,U74-U76,U92,U100
68	314-0078	1	IC 74LS02	U79
69	314-0083	1	IC 74LS240	U88
70	314-0087	1	IC 74LS139	U32
71	314-0099	2	IC 74LS245	U43,U85
72	314-0102	4	IC 74LS367	U26,U35,U47,U64
73	314-0019	1	IC 74LS377	U73
74	314-0122	2	IC 74LS299	U90,U91
75	314-0143	2	IC 74LS259	U55,U56
76	314-0146	1	IC 7416	U30
77	314-0272	4	IC 74LS353	U81,U82,U86,U87
78	314-0104	4	IC 74LS138	U33,U57-U59
79	315-0033	1	IC CD4016	U17
80	315-0035	1	IC MM5837	U2
81	315-0041	1	IC Z80A (MK3880-4)	U24
82	315-0046	2	IC 2114/2114L RAM	U70,U71
83	315-0125	2	IC MB8128-15	U37,U38
84	315-0152	1	IC 8255AC-5	U23
85	316-1468	1	IC 2716 EPR - 1468 ZAXXON	U68

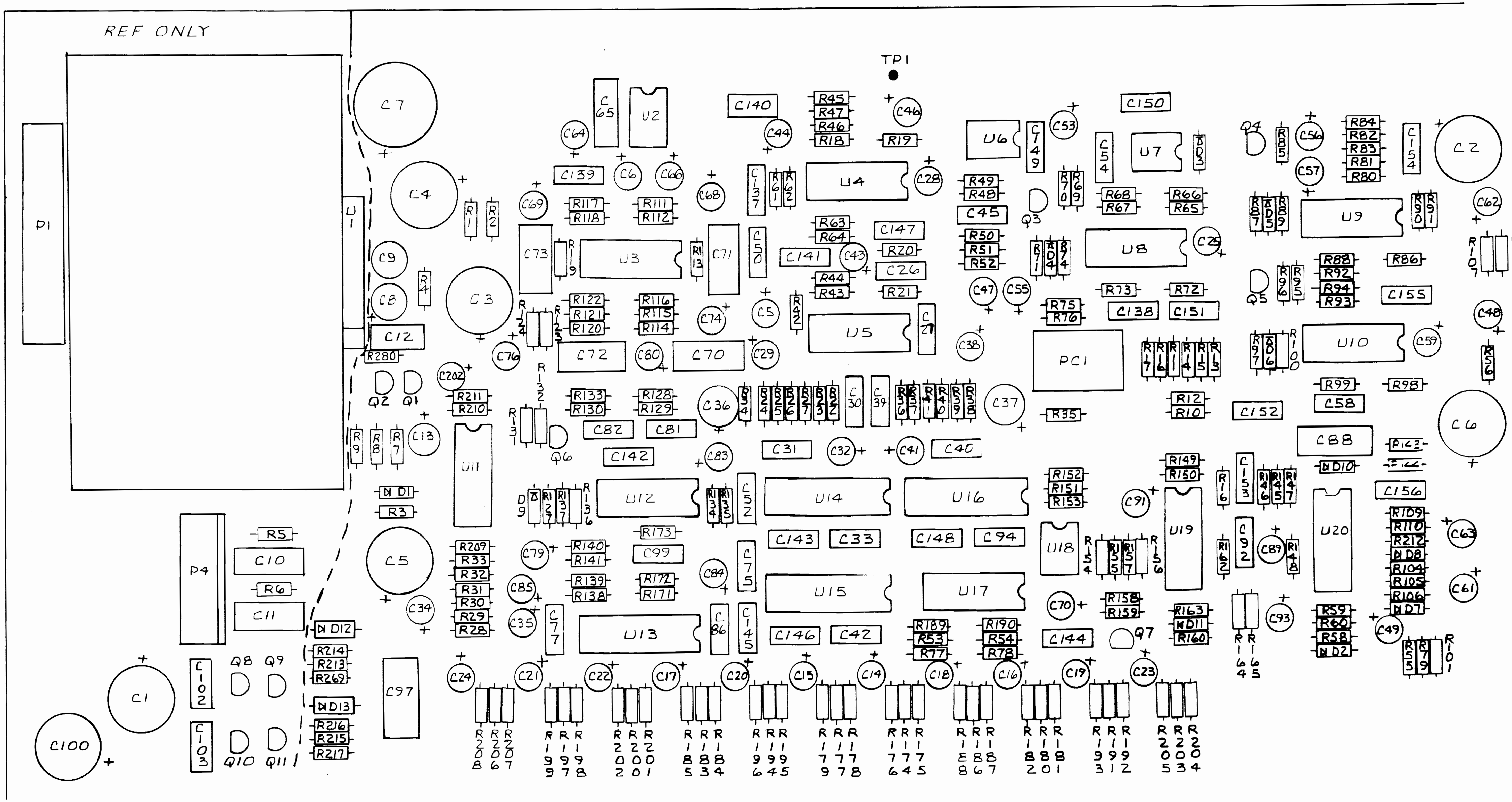
Item No.	Part No.	Qty. Req'd.	Description	Ref. Des.
86	316-1469	1	IC 2716 EPR - 1469 ZAXXON	U69
87	316-1471	1	IC TPB28L22PR - 1471 ZAXXON	U98
88	316-1472	1	IC TPB24S10PR - 1472 ZAXXON	U72
89	316-1473	1	IC 2564 EPR-1473 turbo mini type	U27
90	316-1474	1	IC 2564 EPR-1474 turbo mini type	U28
91	316-1475	1	IC 2532 EPR-1475 turbo mini type	U29
92	470-0101	19	Res 100 Ohm 1/4W 5%	R130,R232-R246, R272-R274
93	470-0102	27	Res 1K Ohm 1/4W 5%	R1,R2,R28,R31,R57, R103,R106,R108,R170, R171,R207,R217,R227, R254,R257,R265-R267, R269-R271,R275-R280
94	470-0103	21	Res 10K Ohm 1/4W 5%	R7,R19,R20,R47,R55, R74,R75,R79,R89, R100,R101,R112,R128, R151,R152,R163,R209, R214,R216,R226,R231
95	470-0104	21	Res 100K Ohm 1/4W 5%	R9,R16,R24,R25,R38, R39,R43,R64,R73,R88, R91,R99,R111,R114, R118,R120,R127,R134, R135,R162,R229
96	470-0105	5	Res 1M Ohm 1/4W 5%	R109,R110,R146,R147, R164
97	470-0121	1	Res 120 Ohm 1/4W 5%	R169
98	470-0122	2	Res 1.2K Ohm 1/4W 5%	R261,R264
99	470-0123	3	Res 12K Ohm 1/4W 5%	R26,R40,R51

Item No.	Part No.	Qty. Req'd.	Description	Ref. Des.
100	470124	3	Res 120K Ohm 1/4W 5%	R67,R90,R223
101	470-0152	2	Res 1.5K Ohm 1/4W 5%	R4,R172
102	470-0153	11	Res 15K Ohm 1/4W 5%	R61,R62,R96,R113,R116, R119,R122,R131,R159, R174,R194
103	470-0154	3	Res 150K Ohm 1/4W 5%	R115,R121,R218
104	470-0183	1	Res 18K Ohm 1/4W 5%	R142
105	470-0203	1	Res 20K Ohm 1/4W 5%	R219
106	470-0204	2	Res 200K Ohm 1/4W 5%	R18,R46
107	470-0220	2	Res 22 Ohm 1/4W 5%	R258,R263
108	470-0221	7	Res 220 Ohm 1/4W 5%	R213,R215,R250,R252, R255,R259,R262
109	470-0222	13	Res 2.2K Ohm 1/4W 5%	R8,R10,R11,R22,R23, R36,R37,R71,R76,R85, R87,R97,R160
110	470-0223	6	Res 22K Ohm 1/4W 5%	R66,R141,R175,R177, R178,R180
111	470-0224	9	Res 220K Ohm 1/4W 5%	R29,R30,R32,R33,R59, R60,R81,R165,R222
112	470-0225	2	Res 2.2M Ohm 1/4W 5%	R80,R148
113	470-0272	1	Res 2.7K Ohm 1/4W 5%	R153
114	470-0273	1	Res 27K Ohm 1/4W 5%	R181
115	470-0274	1	Res 270K 1/4W 5%	R145
116	470-0303	3	Res 30K Ohm 1/4W 5%	R82,R92,R93
117	470-0331	2	Res 330 Ohm 1/4W 5%	R3,R126
118	470-0332	6	Res 3.3K Ohm 1/4W 5%	R27,R41,R50,R52,R132, R143

Item No.	Part No.	Qty. Req'd.	Description	Ref. Des.
119	470-0333	8	Res 33K Ohm 1/4W 5%	R123,R124,R139,R150, R156-R158,R161
120	470-0334	2	Res 330K Ohm 1/4W 5%	R117,R173
121	470-0363	3	Res 36K Ohm 1/4W 5%	R14,R56,R102
122	470-0391	3	Res 390 Ohm 1/4W 5%	R17,R34,R35
123	470-0392	1	Res 3.9K Ohm 1/4W 5%	R201
124	470-0393	2	Res 39K Ohm 1/4W 5%	R183,R203
125	470-04R7	2	Res 4.7 Ohm 1/4W 5%	R5,R6
126	470-0471	9	Res 470 Ohm 1/4W 5%	R58,R168,R212,R247-R249,R251,R253,R256
127	470-0472	4	Res 4.7K Ohm 1/4W 5%	R192,R224,R225,R228
128	470-0473	11	Res 47K Ohm 1/4W 5%	R48,R70,R107,R125, R129,R166,R167,R186, R191,R198,R200
129	470-0474	3	Res 470K Ohm 1/4W 5%	R21,R104,R105
130	470-0503	1	Res 50K Ohm 1/4W 5%	R63
131	470-0512	2	Res 5.1K Ohm 1/4W 5%	R65,R133
132	470-0513	30	Res 51K Ohm 1/4W 5%	R42,R53,R54,R68,R69, R72,R77,R78,R83,R84, R86,R94,R95,R98,R136, R137,R176,R179,R182, R185,R188-R190,R193, R196,R199,R202,R205, R208,R221
133	470-0561	1	Res 560 Ohm 1/4W 5%	R144
134	470-0562	3	Res 5.6K Ohm 1/4W 5%	R149,R220,R268
135	470-0563	1	Res 56K Ohm 1/4W 5%	R15
136	470-0680	2	Res 68 Ohm 1/4W 5%	R230,R260

Item No.	Part No.	Qty. Req'd.	Description	Ref. Des.
137	470-0682	1	Res 6.8K Ohm 1/4W 5%	R44
138	470-0683	5	Res 68K Ohm 1/4W 5%	R12,R45,R49,R206, R211
139	470-0821	1	Res 820 Ohm 1/4W 5%	R155
140	470-0822	6	Res 8.2K Ohm 1/4W 5%	R154,R184,R187,R195, R197,R204
141	470-0823	2	Res 82K Ohm 1/4W 5%	R13,R210
142	477-0005	4	Res pack 8 x 4.7K Ohm	RM1-RM4
143	477-0006	2	Res pack 8 x 1K Ohm	RM5,RM6
144	481-0213	13	Diode 1S2075K	01-011,D14,D15
145	482-0037	3	Transistor 2SA 564	Q13-Q15
146	482-0057	2	Transistor 2SC 1384	Q8,Q10
147	482-0240	10	Transistor 2SC 1684	Q1-Q7,Q9,Q11,Q12
148	509-0156	1	Switch 1 pos dip spst	SW4
149	510-0049	2	Switch 8 pos dip spst	SW1,SW2
150	510-0053	1	Switch push button side pc mnt	SW3
151	530-0027	1	Heatsink 6.2 deg C/W L=40	
152	601-0727	1	Photocoupler Moririk MCD-725	PC1


SEE DETAIL A ON SHT 16
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35 4 PLS
P1
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TP2
TP3
TP4
SW1
SW2
SW3 TEST
SW4
RM1
RM2
RM3
RM4
RM5
RM6
ROM 1
ROM 2
ROM 3
ROM 14
ROM 15
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U24
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U28
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U69
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C101
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R271
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R246
R125
R166
R277
C135
C184


REF ONLY
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U20
PC1

DETAIL A

ASSEMBLY IC BOARD B DRAWING NUMBER 834-0211

Item No.	Part No.	Qty. Req'd.	Description	Ref. Des.
1	150-0031	2	Cap E 470 mf 16V	C1,C2
2	150-0223	2	Cap E 33 mf 16V	C9,C10
3	151-0011	4	Cap cer .01 mf 50V	C4,C6,C8,C14
4	151-0043	1	Con cer 220 pf 50V	C81
5				
6	151-0073	68	Cap cer .047 mf 25V	C12,C13,C15-C80
7	151-0079	1	Cap 47 pf 50V	C11
8	151-0114	2	Cap 15 pf 50V	C5,C7
9	151-0115	1	Cap 39 pf 50V	C3
10	171-0079	1	Printed bd coin circuit	
11	180-0018	1	Peaking coil .68 mh	L1
12	211-0168	4	Conn pin test pt	TP1-TP4
13	212-0098	1	Conn male 10 pin rta	P1
14	212-0133	2	Conn male 50 pin	P2,P3
15	213-0011	2	Skt 22 pin dual inln	XU42,XU62
16	213-0012	10	Skt 28 pin dual inln	XU77-XU79,XU90-XU93, XU111-XU113
17	230-0043	1	Crystal 48.660 MHz	X1
18	314-0018	2	IC 74LS00	U10,U52
19	314-0019	6	IC 74LS04	U11,U22,U55,U71,U84, U99
20	314-0055	1	IC 74LS244	U3
21	314-0058	1	IC 74LS08	U76
22	314-0060	4	IC 74LS20	U24,U32,U51,U108
23	314-0062	3	IC 74LS74	U28,U29,U45

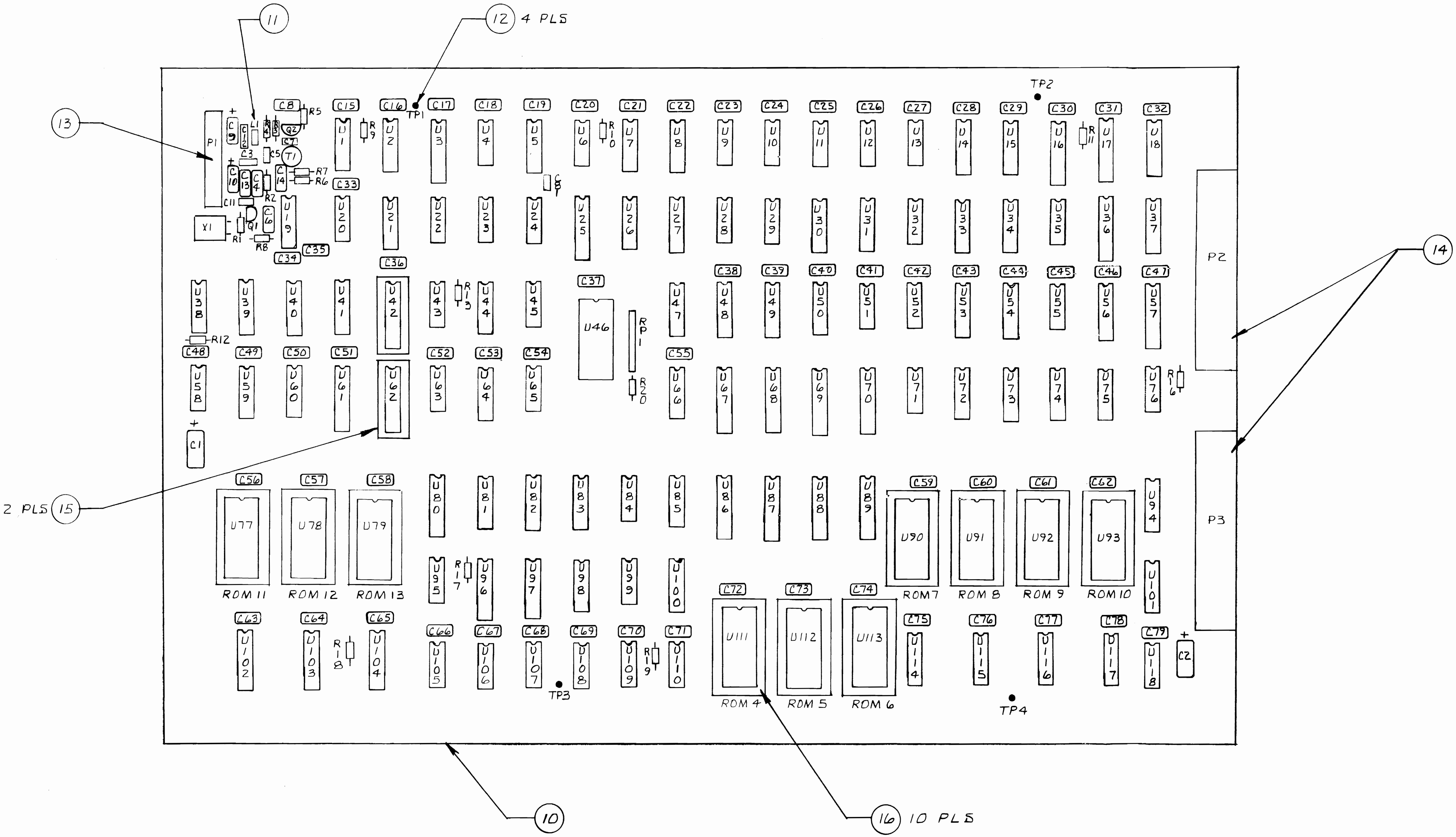
Item No.	Part No.	Qty. Req'd.	Description	Ref. Des.
24	314-0066	1	IC 74LS27	U109
25	314-0067	1	IC 74LS30	U6
26	314-0068	1	IC 74LS32	U35
27	314-0070	6	IC 74LS86	U4,U12,U13,U23,U95, U107
28	314-0072	1	IC 74LS174	U85
29	314-0076	10	IC 74LS157	U18,U37,U39,U47,U49, U50,U59,U66,U105,U106
30	314-0078	1	IC 74LS02	U9
31	314-0087	1	IC 74LS139	U8
32	314-0093	3	IC 74LS374	U80,U114,U117
33	314-0097	5	IC 74LS161	U26,U27,U30,U31,U48
34	314-0099	1	IC 74LS245	U57
35	314-0100	5	IC 74LS273	U16,U25,U96,U97,U100
36	314-0101	15	IC 74LS283	U14,U15,U33,U34,U53, U54,U56,U72-U75, U81-U83,U98
37	314-0102	3	IC 74LS367	U94,U101,U118
38	314-0103	1	IC 74LS368	U5
39	314-0104	1	IC 74LS138	U7
40	314-0119	3	IC 74LS377	U67,U86,U115
41	314-0122	6	IC 74LS299	U68-U70,U102-U104
42	314-0139	5	IC 74S163	U1,U2,U21,U44,U64
43	314-0151	1	IC 74S112	U38
44	314-0178	1	IC 74S139	U41
45	314-0237	1	IC 74LS109	U110

ASSEMBLY IC BOARD B DRAWING NUMBER 834-0211

Item No.	Part No.	Qty. Req'd.	Description	Ref.Des.
46	314-0243	1	IC 10125	U19
47	314-0269	2	IC 74S157	U40,U60
48	314-0273	2	IC 74S32	U20,U65
49	314-0274	2	IC 74S86	U43,U63
50	314-0131	4	TC 74LS373	U87-U89,U116
51	314-0276	1	IC 74S260	U58
52	315-0071	1	IC Ram MB-7063	U46
53	314-0275	1	IC 74S373	U61
54	315-0155	2	IC 93422	U42,U62
55	316-1456	1	IC 2564 EPR 1456	U93
56	316-1457	1	IC 2564 EPR 1457	U92
57	316-1458	1	IC 2564 EPR 1458	U91
58	316-1459	1	IC 2564 EPR 1459	U90
59	316-1460	1	IC 2564 EPR 1460	U113
60	316-1461	1	IC 2564 EPR 1461	U112
61	316-1462	1	IC 2564 EPR 1462	U111
62	316-1465	1	IC 2564 EPR 1465	U77
63	316-1466	1	IC 2564 EPR 1466	U78
64	316-1467	1	IC 2564 EPR 1467	U79
65				
66	470-0102	12	Res 1K Ohm 1/4W 5%	R9-R20
67	470-0103	3	Res 10K Ohm 1/4W 5%	R3,R4,R8
68	470-0222	2	Res 2.2K Ohm 1/4W 5%	R6,R7
69	470-0331	1	Res 330 Ohm 1/4W 5%	R2

ASSEMBLY IC BOARD B DRAWING NUMBER 834-0211

Item No.	Part No.	Qty. Req'd.	Description	Ref. Des.
70	470-0471	1	Res 470 Ohm 1/4W 5%	R5
71	470-0472	1	Res 4.7K Ohm 1/4W 5%	R1
72	477-0006	1	Res pack 8 x 1K Ohm 1/8W	RP1
73	482-0270	2	XSTR 2 SC 1907	Q1,Q2
74	560-0076	1	XFMR RF 4:1	T1



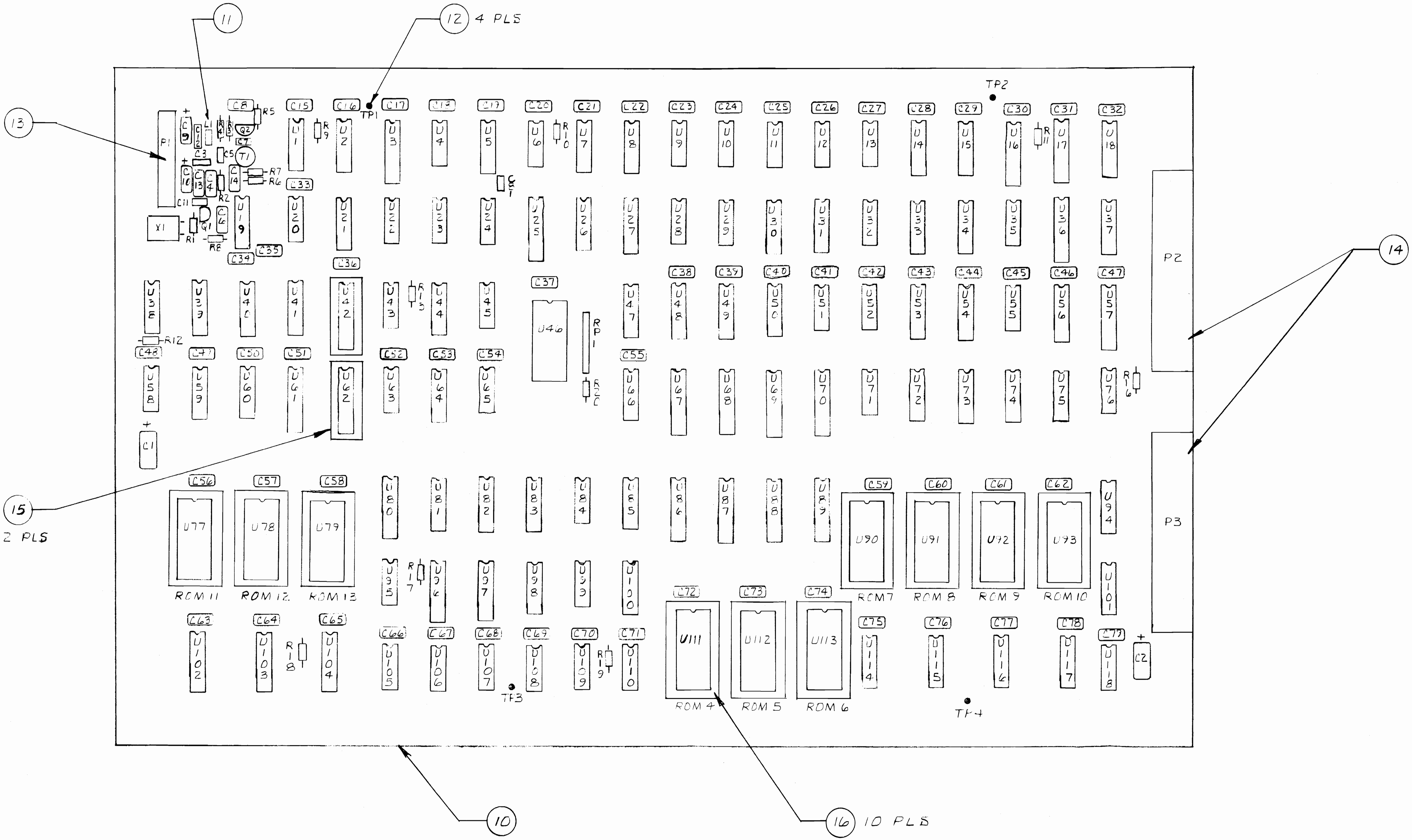
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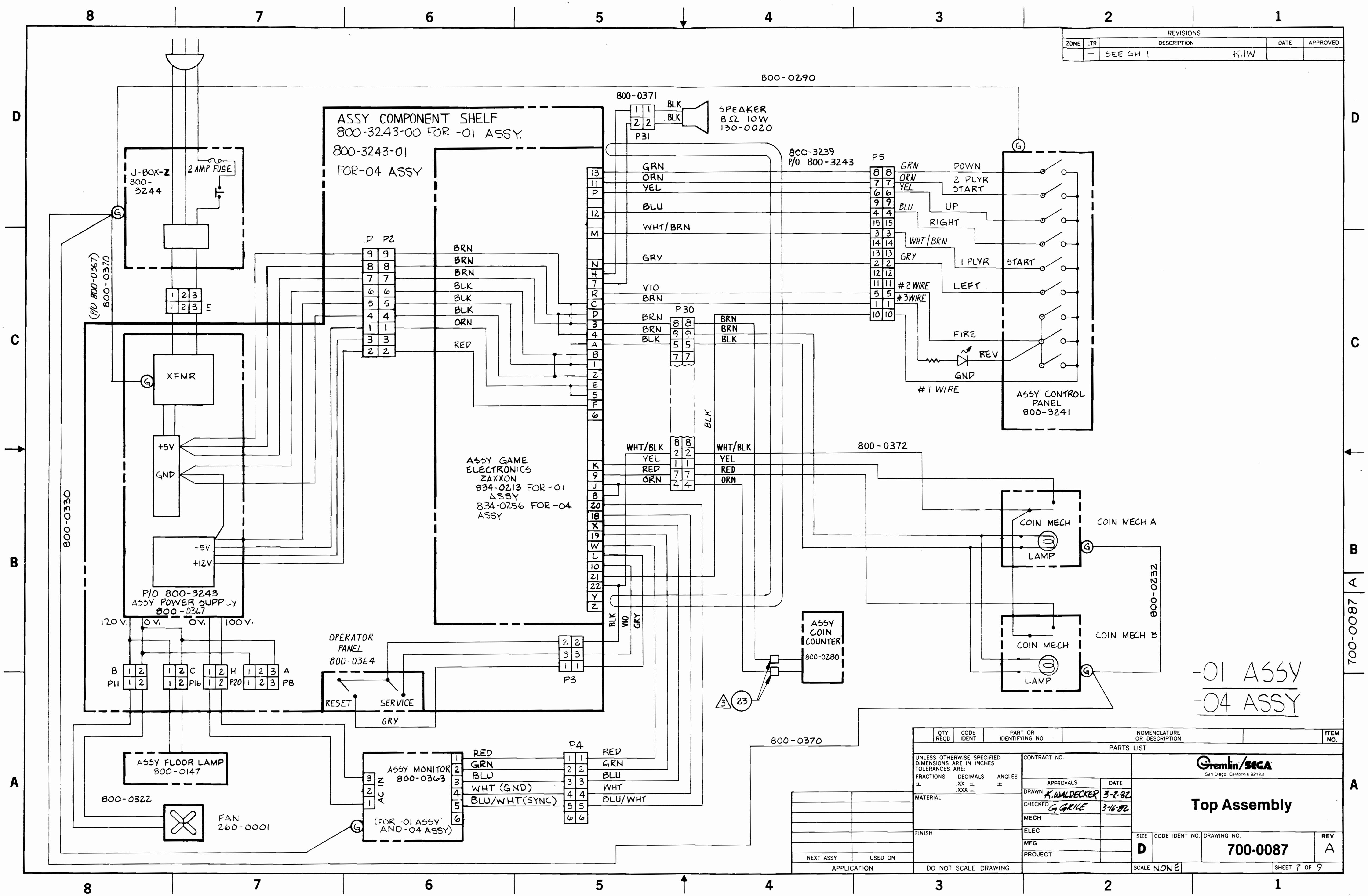
Item No.	Part No.	Qty. Req'd.	Description	Ref. Des.
1	150-0031	2	Cap E 470 mf 16V	C1,C2
2	150-0223	2	Cap E 33 mf 16V	C9,C10
3	151-0011	4	Cap cer .01 mf 50V	C4,C6,C8,C14
4	151-0043	1	Con cer 220 pf 50V	C81
5				
6	151-0073	68	Cap cer .047 mf 25V	C12,C13,C15-C80
7	151-0079	1	Cap 47 pf 50V	C11
8	151-0114	2	Cap 15 pf 50V	C5,C7
9	151-0115	1	Cap 39 pf 50V	C3
10	171-0079	1	Printed bd coin circuit	
11	180-0018	1	Peaking coil .68 mh	L1
12	211-0168	4	Conn pin test PT	TP1-TP4
13	212-0098	1	Conn male 10 pin RTA	P1
14	212-0133	2	Conn male 50 pin	P2,P3
15	213-0011	2	Skt 22 pin dual inln	XU42,XU62
16	213-0012	10	Skt 28 pin dual inln	XU77-XU79,XU90-XU93, XU111-XU113
17	230-0043	1	Crystal 48.660 mhz	X1
18	314-0018	2	IC 74LS00	U10,U52
19	314-0019	6	IC 74LS04	U11,U22,U55,U7,U84, U99
20	314-0055	1	IC 74LS244	U3
21	314-0058	1	IC 74LS08	U76
22	314-0060	4	IC 74LS20	U24,U32,U51,U108
23	314-0062	3	IC 74LS74	U28,U29,U45

Item No.	Part No.	Qty. Req'd.	Description	Ref. Des.
24	314-0066	1	IC 74LS27	U109
25	314-0067	1	IC 74LS30	U6
26	314-0068	1	IC 74LS32	U35
27	314-0070	6	IC 74LS86	U4,U12,U13,U23,U95, U107
28	314-0072	1	IC 74LS174	U85
29	314-0076	10	IC 74LS157	U18,U37,U39,U47,U49, U50,U59,U66,U105, U106
30	314-0078	1	IC 74LS02	U9
31	314-0087	1	IC 74LS139	U8
32	314-0093	3	IC 74LS374	U80,U114,U117
33	314-0097	5	IC 74LS161	U26,U27,U30,U31,U48
34	314-0099	1	IC 74LS245	U57
35	314-0100	5	IC 74LS273	U16,U25,U96,U97,U100
36	314-0101	15	IC 74LS283	U14,U15,U33,U34,U53, U54,U56,U72-U75, U81-U83,U98
37	314-0102	3	IC 74LS367	U94,U101,U118
38	314-0103	1	IC 74LS368	U5
39	314-0104	1	IC 74LS138	U7
40	314-0119	3	IC 74LS377	U67,U86,U115
41	314-0122	6	IC 74LS299	U68-U70,U102-U104
42	314-0139	5	IC 74S163	U1,U2,U21,U44,U64
43	314-0151	1	IC 74S112	U38
44	314-0178	1	IC 74S139	U41
45	314-0237	1	IC 74LS109	U19

Item No.	Part No.	Qty. Req'd.	Description	Ref. Des.
46	314-0243	1	IC 10125	U19
47	314-0269	2	IC 74S157	U40,U60
48	314-0273	2	IC 74S32	U20,U65
49	314-0274	2	IC 74S86	U43,U63
50	314-0131	4	IC 74LS373	U87-U89,U116
51	314-0276	1	IC 74S260	U58
52	315-0071	1	IC ram MB-7063	U46
53	314-0275	1	IC 74S373	U61
54	315-0155	2	IC 93422	U42,U62
55	316-1492	1	IC 2763 EPR 1492	U93
56	316-1493	1	IC 2763 EPR 1493	U92
57	316-1494	1	IC 2763 EPR 1494	U91
58	316-1495	1	IC 2763 EPR 1495	U90
59	316-1496	1	IC 2763 EPR 1496	U113
60	316-1497	1	IC 2763 EPR 1497	U112
61	316-1498	1	IC 2763 EPR 1498	U111
62	316-1499	1	IC 2763 EPR 1499	U77
63	316-1500	1	IC 2763 EPR 1500	U78
64	316-1501	1	IC 2763 EPR 1501	U79
65				
66	470-0102	12	Res IK Ohm 1/4W 5%	R9-R20
67	470-0103	3	Res 10K Ohm 1/4W 5%	R3,R4,R8
68	470-0222	2	Res 2.2K Ohm 1/4W 5%	R6,R7
69	470-0331	1	Res 330 Ohm 1/4W 5%	R2

Item No.	Part No.	Qty. Req'd.	Description	Ref. Des.
70	470-0471	1	Res 470 Ohm 1/4W 5%	R5
71	470-0472	1	Res 4.7K Ohm 1/4W 5%	R1
72	477-0006	1	Res pack 8 x 1 K Ohm 1/8W	RP1
73	482-0270	2	XSTR 2SC 1907	Q1,Q2
74	560-0076	1	XFMR RF 4:1	T1


11
12 4 PLS
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16 10 PLS
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ROM 6



Gremlin/SEGA

San Diego California 92123

Top Assembly

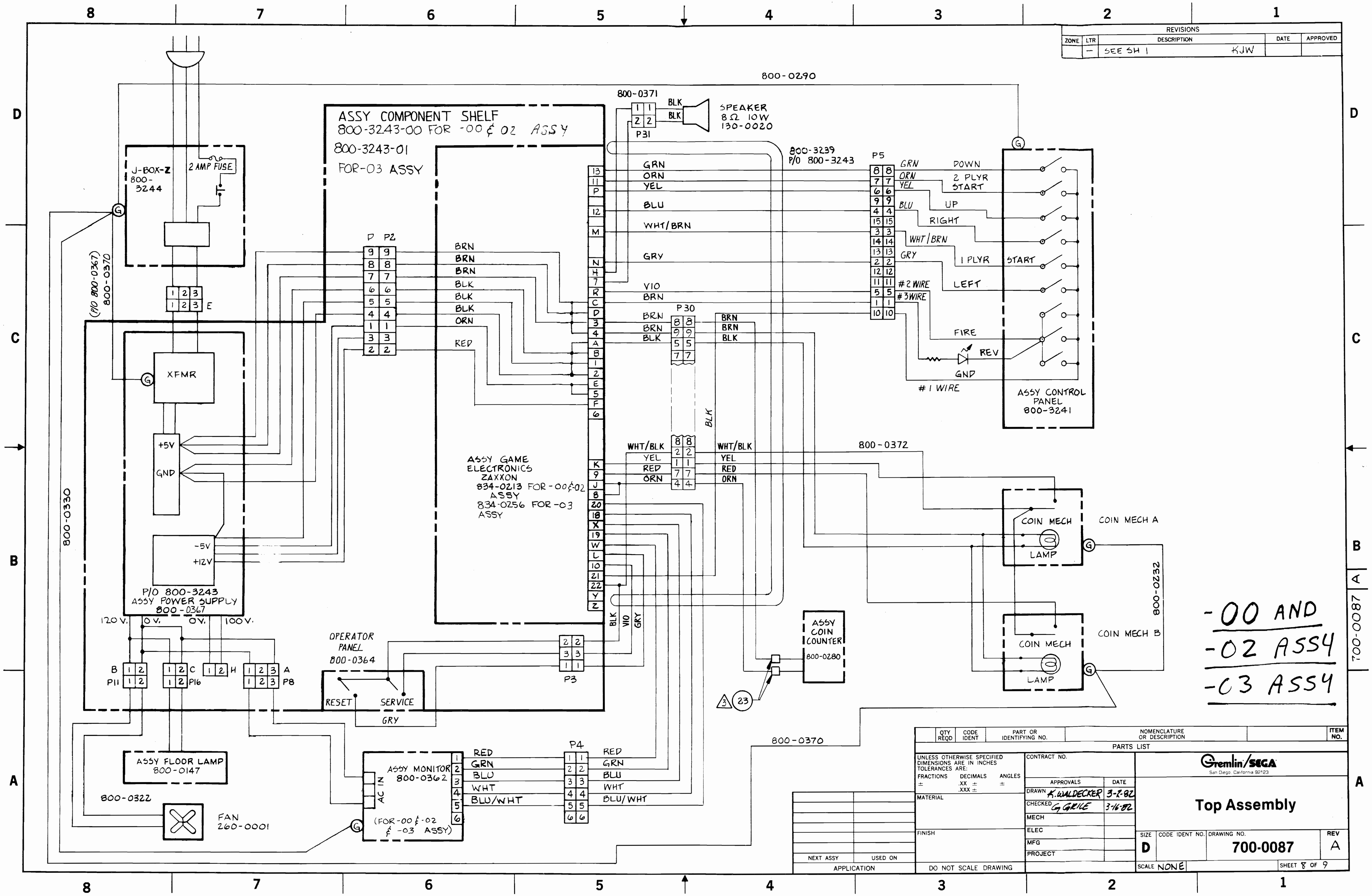
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CHECKED G GRILE 3-16-82

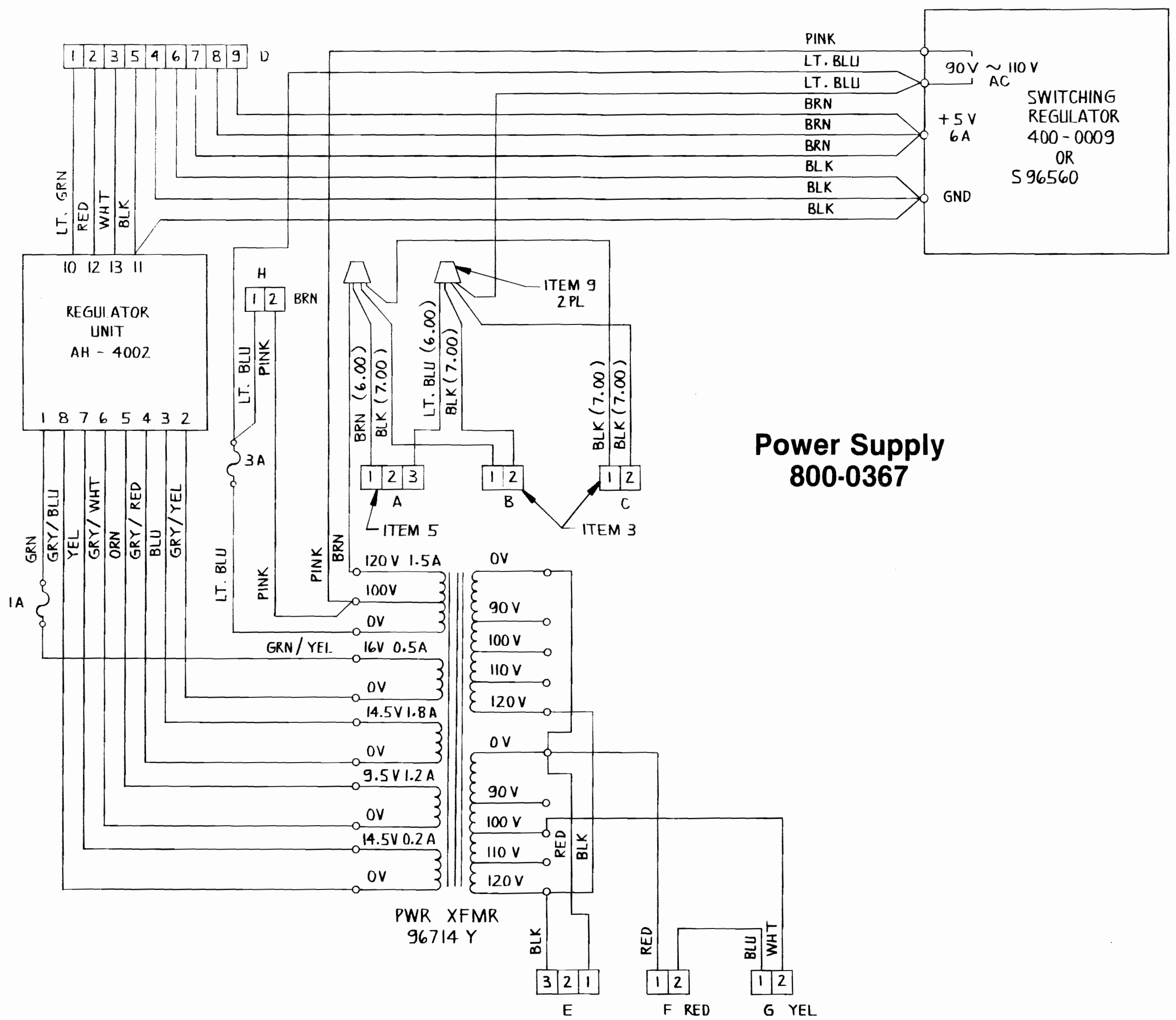
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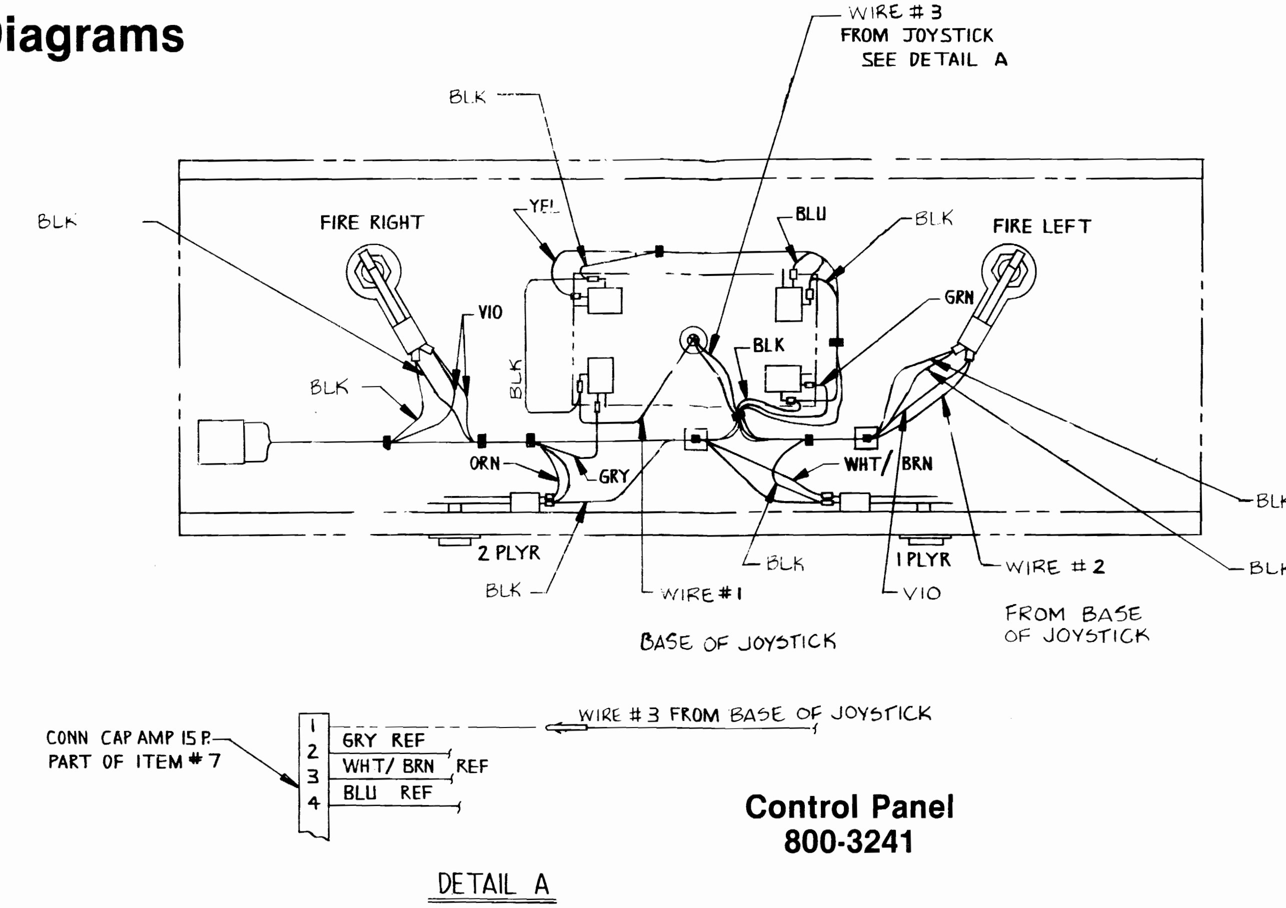
DO NOT SCALE DRAWING


REVISIONS
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BLK
SPEAKER
8Ω 10W
130-0020
P31
ASSY COMPONENT SHELF
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800-3243-01
FOR-03 ASSY
J-BOX-Z
800-3244
2 AMP FUSE
(P/O 800-0367)
800-0370
E
XFMR
+5V
GND
-5V
+12V
P/O 800-3243
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120 V.
0 V.
0 V.
100 V.
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C
P16
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P8
ASSY FLOOR LAMP
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800-0322
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BRN
BRN
BRN
BLK
BLK
BLK
ORN
RED
ASSY GAME ELECTRONICS
ZAXXON
834-0213 FOR -00 & 02
ASSY
834-0256 FOR -03
ASSY
GRN
ORN
YEL
BLU
WHT/BRN
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P30
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RED
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GRY
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#3 WIRE
DOWN
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START
UP
RIGHT
1 PLYR
START
LEFT
FIRE
REV
GND
1 WIRE
ASSY CONTROL
PANEL
800-3241
800-0372
COIN MECH
LAMP
COIN MECH A
COIN MECH
LAMP
COIN MECH B
800-0232
ASSY
COIN
COUNTER
800-0280
23
OPERATOR
PANEL
800-0364
RESET
SERVICE
GRY
P3
BLK
VIO
GRY
P4
RED
GRN
BLU
WHT
BLU/WHT
ASSY MONITOR
800-0362
AC IN
(FOR -00 & -02
& -03 ASSY)
800-0370
-00 AND
-02 ASSY
-03 ASSY
QTY REQD | CODE IDENT | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | ITEM NO.
PARTS LIST
UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ±
DECIMALS .XX ± .XXX ±
ANGLES ±
MATERIAL
FINISH
NEXT ASSY
USED ON
APPLICATION
DO NOT SCALE DRAWING
CONTRACT NO.
APPROVALS
DATE
DRAWN K. WALDECKER 3-2-82
CHECKED G. GRILE 3-16-82
MECH
ELEC
MFG
PROJECT
Gremlin/SEGA
San Diego, California 92123
Top Assembly
SIZE D
CODE IDENT NO.
DRAWING NO. 700-0087
REV A
SCALE NONE
SHEET 8 OF 9
700-0087 A

Wiring Diagrams

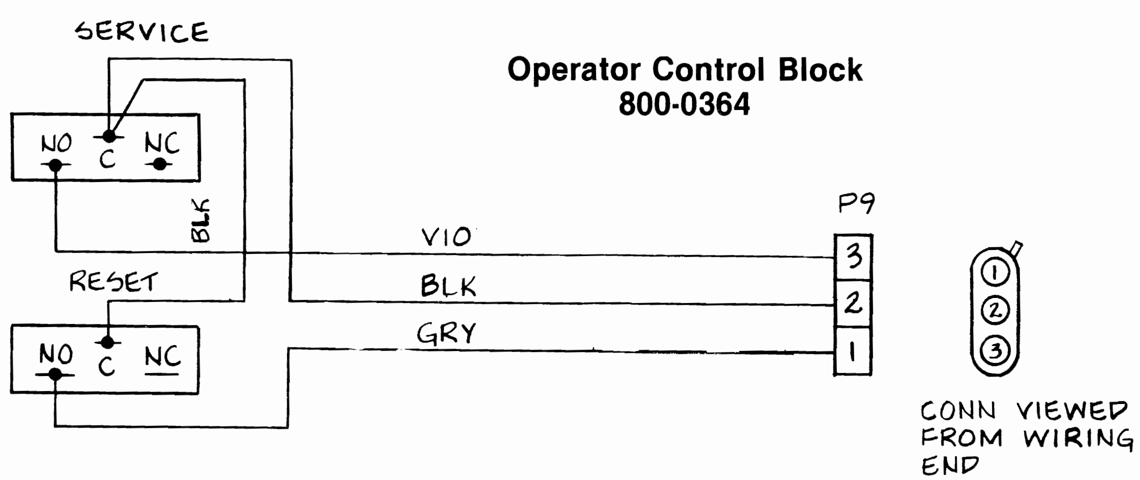


Power Supply
800-0367

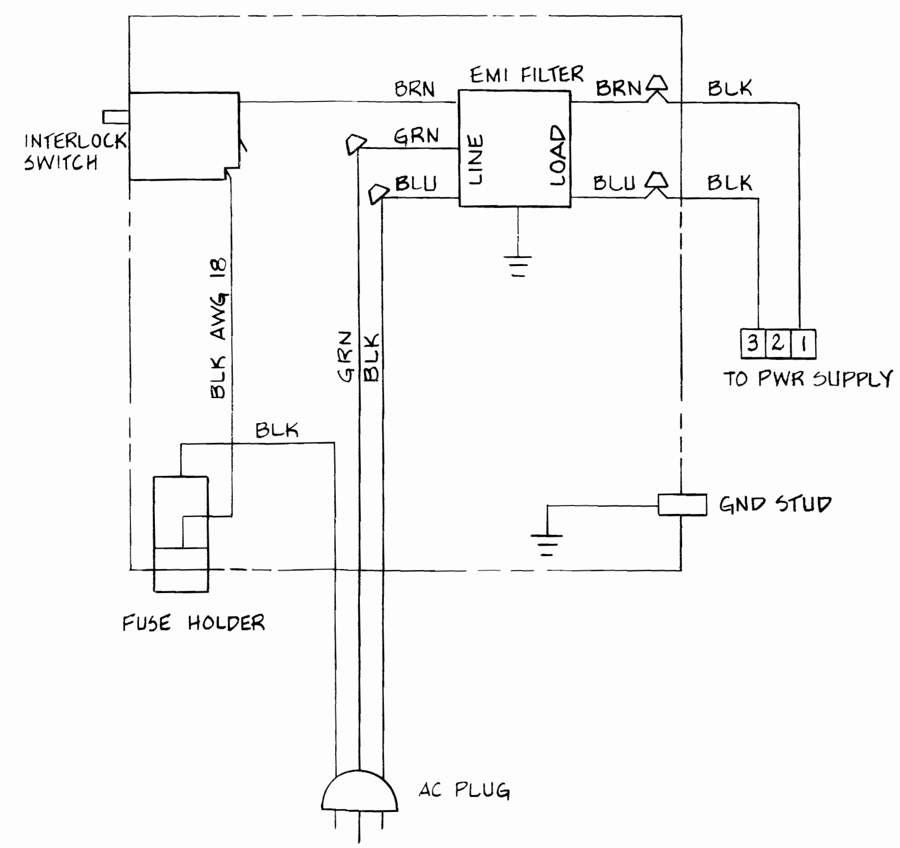


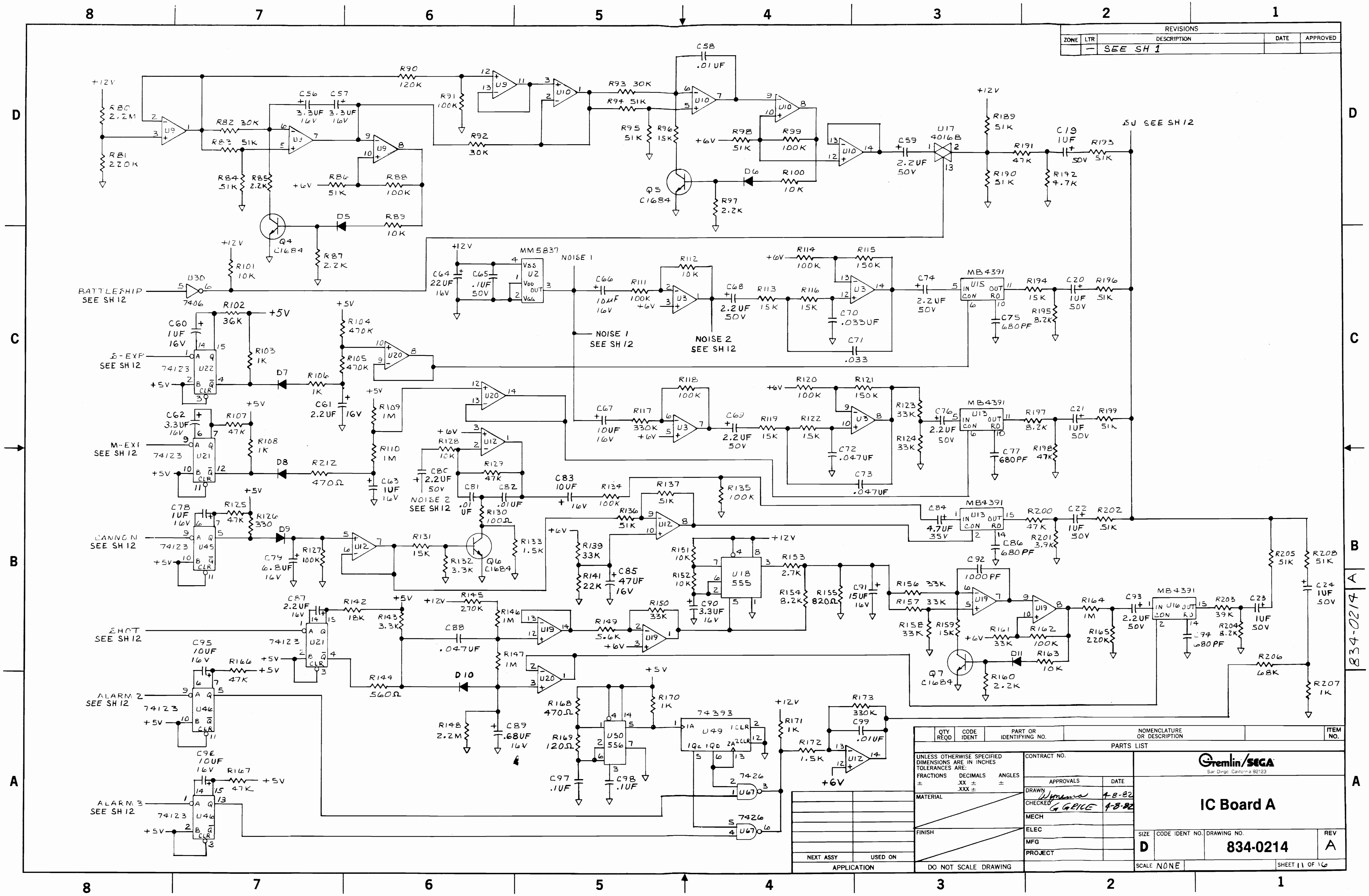
Control Panel
800-3241

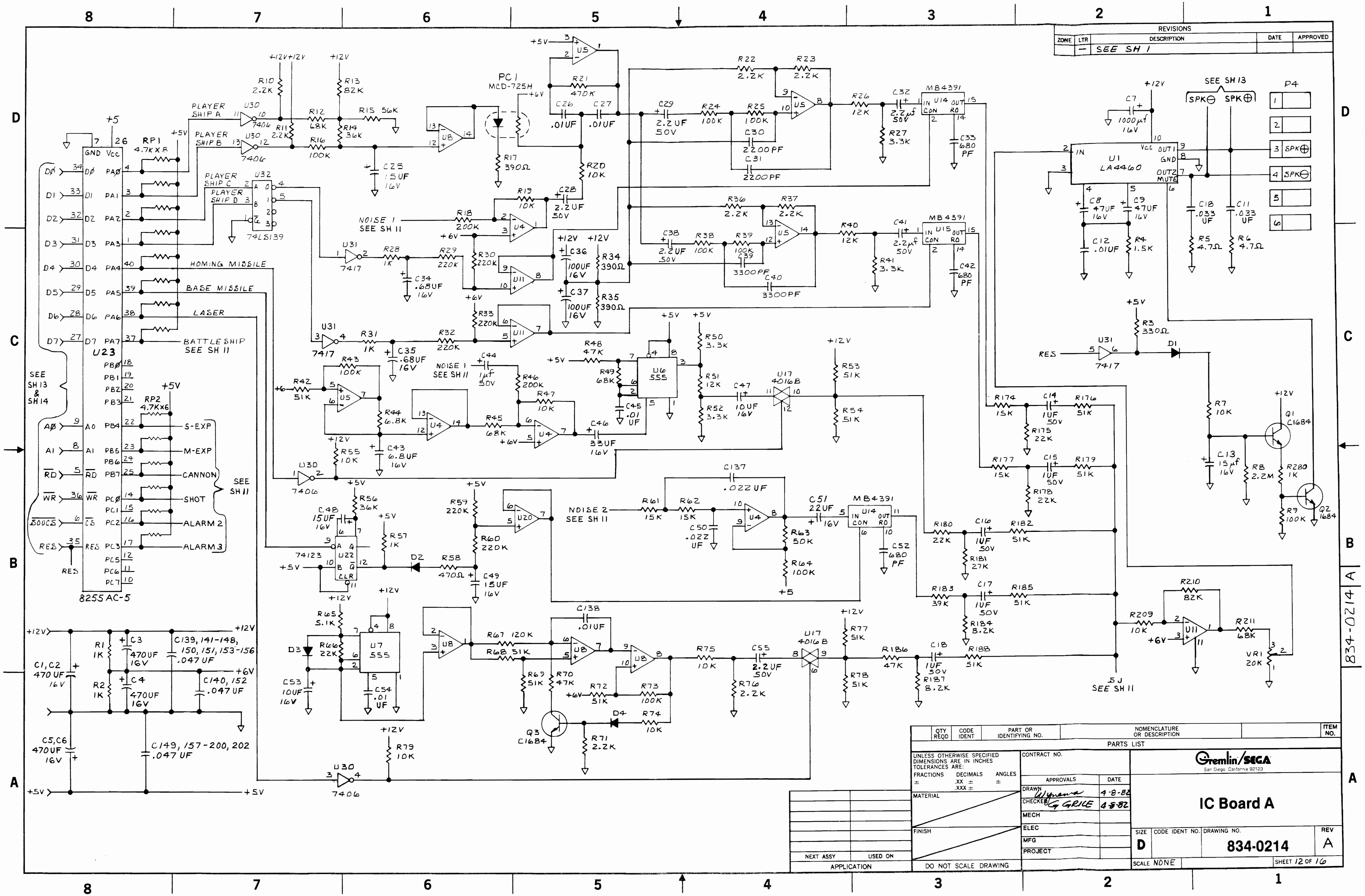
Operator Control Block
800-0364

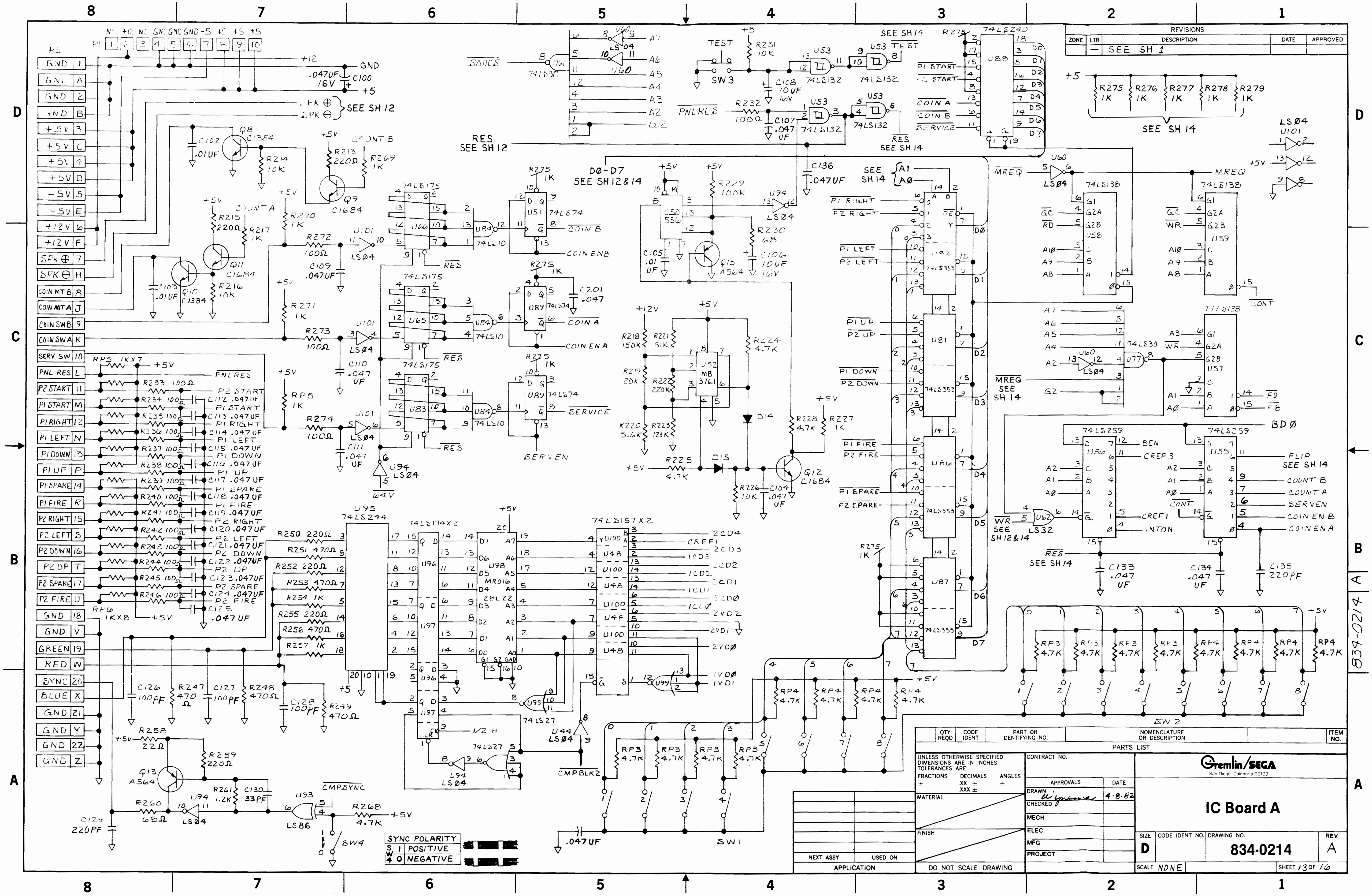


Junction Box
800-3244

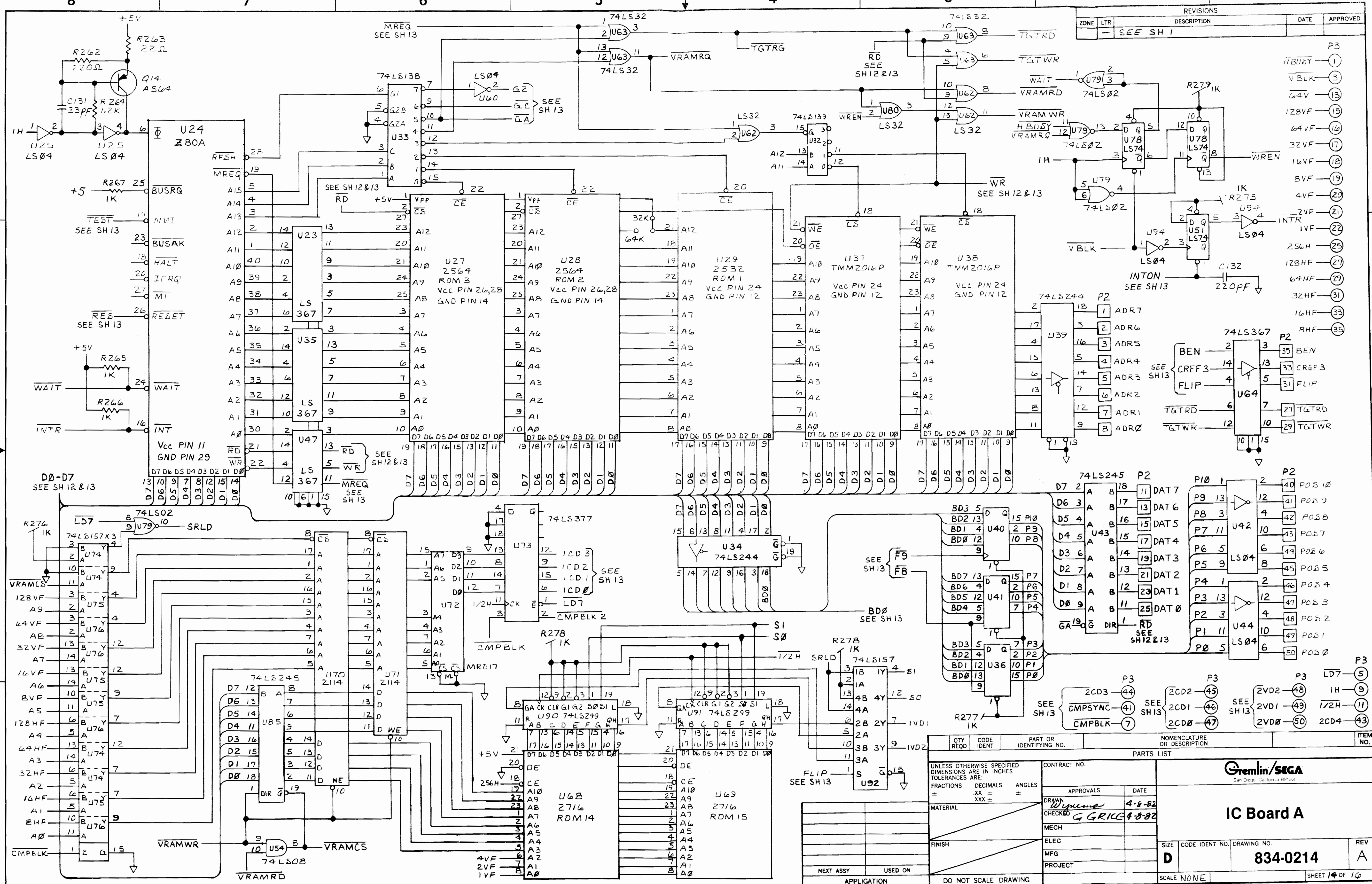



REVISIONS
ZONE | LTR | DESCRIPTION | DATE | APPROVED
— SEE SH 1
BATTLESHIP SEE SH 12
S-EXP SEE SH 12
M-EXP SEE SH 12
CANNON SEE SH 12
SHOT SEE SH 12
ALARM 2 SEE SH 12
ALARM 3 SEE SH 12
NOISE 1
NOISE 1 SEE SH 12
NOISE 2 SEE SH 12
NOISE 2 SEE SH 12
SJ SEE SH 12
MM5837
MB4391
555
556
74393
74123
7406
7426
40168
QTY REQD | CODE IDENT | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | ITEM NO.
PARTS LIST
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:
FRACTIONS ± DECIMALS .XX ± .XXX ± ANGLES ±
MATERIAL
FINISH
CONTRACT NO.
APPROVALS DATE
DRAWN 4-8-82
CHECKED G GRICE 4-8-82
MECH
ELEC
MFG
PROJECT
NEXT ASSY | USED ON
APPLICATION
DO NOT SCALE DRAWING
Gremlin/SEGA
San Diego California 92123
IC Board A
SIZE D
CODE IDENT NO.
DRAWING NO. 834-0214
REV A
SCALE NONE
SHEET 11 OF 16
834-0214 A


REVISIONS
ZONE | LTR | DESCRIPTION | DATE | APPROVED
— SEE SH 1
PLAYER SHIP A
PLAYER SHIP B
PLAYER SHIP C
PLAYER SHIP D
HOMING MISSILE
BASE MISSILE
LASER
BATTLE SHIP SEE SH 11
SEE SH 13 & SH 14
S-EXP
M-EXP
CANNON
SHOT
ALARM 2
ALARM 3
SEE SH 11
8255 AC-5
U23
PC1 MCD-725H
NOISE 1 SEE SH 11
NOISE 2 SEE SH 11
MB4391
U1 LA4460
SEE SH 13
SPK⊖ SPK⊕
P4
SJ SEE SH 11
C1, C2 470 UF 16V
C5, C6 470UF 16V
C139, 141-148, 150, 151, 153-156 .047 UF
C140, 152 .047 UF
C149, 157-200, 202 .047 UF
QTY REQD | CODE IDENT | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | ITEM NO.
PARTS LIST
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:
FRACTIONS ± DECIMALS .XX ± .XXX ± ANGLES ±
MATERIAL
FINISH
NEXT ASSY | USED ON
APPLICATION
DO NOT SCALE DRAWING
CONTRACT NO.
APPROVALS | DATE
DRAWN 4-8-82
CHECKED G GRICE 4-8-82
MECH
ELEC
MFG
PROJECT
Gremlin/SEGA
San Diego, California 92123
IC Board A
SIZE D | CODE IDENT NO. | DRAWING NO. 834-0214 | REV A
SCALE NONE | SHEET 12 OF 16
834-0214 A



REVISIONS
ZONE LTR DESCRIPTION DATE APPROVED
— SEE SH 1
SEE SH 12
RES SEE SH 12
DØ-D7 SEE SH 12 & 14
SEE SH 14
TEST
SW3
SW1
SW2
SW4
PNL RES
SAUCS
MREQ
74LS175
74LS74
74LS10
74LS132
74LS240
74LS138
74LS353
74LS259
74LS244
74LS174 X 2
74LS157 X 2
74LS30
74LS27
74LS32
LS86
MR016 28L22
MB 3761
COIN ENB
COIN ENA
SERVICE
SERVEN
BDØ
FLIP SEE SH 14
SYNC POLARITY
SW4 1 POSITIVE
0 NEGATIVE
CMPSYNC
CMPBLK2
PARTS LIST
QTY REQD
CODE IDENT
PART OR IDENTIFYING NO.
NOMENCLATURE OR DESCRIPTION
ITEM NO.
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:
FRACTIONS ± DECIMALS .XX ± .XXX ± ANGLES ±
MATERIAL
FINISH
NEXT ASSY
USED ON
APPLICATION
DO NOT SCALE DRAWING
CONTRACT NO.
APPROVALS DATE
DRAWN 4-8-82
CHECKED
MECH
ELEC
MFG
PROJECT
Gremlin/SEGA
San Diego, California 92123
IC Board A
SIZE D
CODE IDENT NO.
DRAWING NO. 834-0214
REV A
SCALE NONE
SHEET 13 OF 16
834-0214 A



PARTS LIST

QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	ITEM NO.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS ± DECIMALS .XX ± .XXX ± ANGLES ±

MATERIAL

FINISH

NEXT ASSY | USED ON

APPLICATION

DO NOT SCALE DRAWING

CONTRACT NO.

APPROVALS	DATE
DRAWN Wyman	4-8-82
CHECKED G GRIGG	4-8-82
MECH	
ELEC	
MFG	
PROJECT	

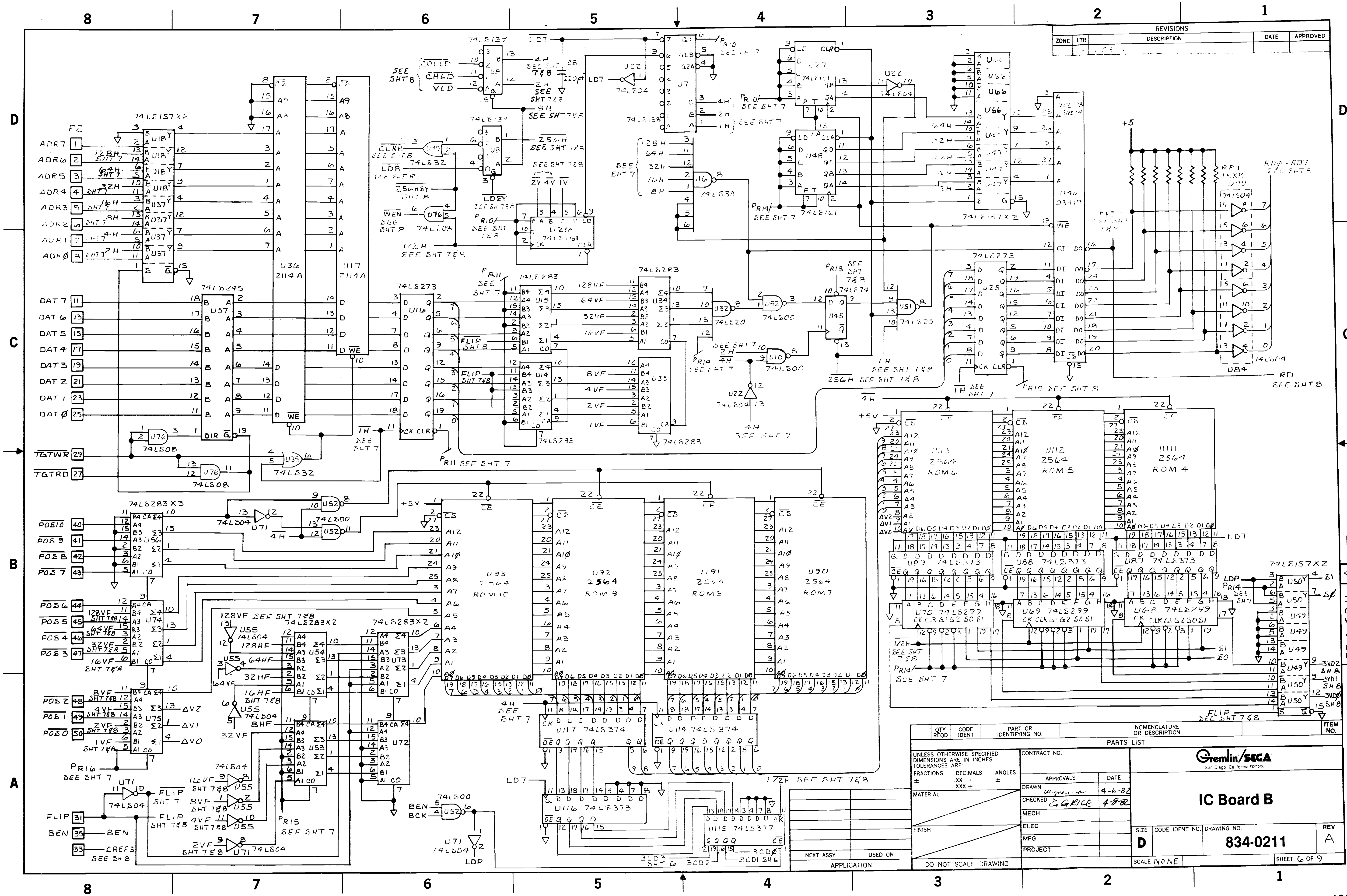
Gremlin/SEGA
San Diego California 92123

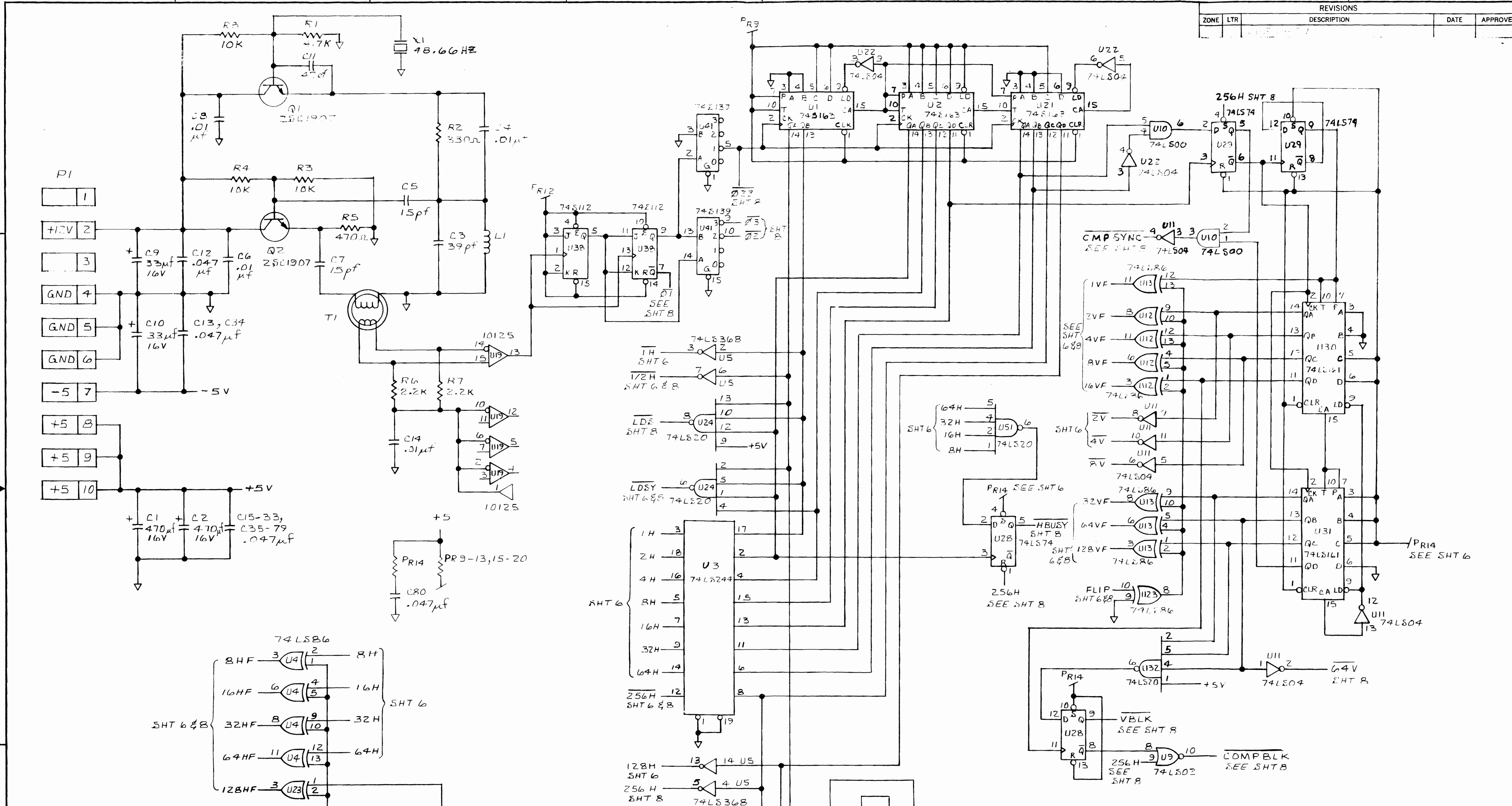
IC Board A

SIZE D | CODE IDENT NO. | DRAWING NO. 834-0214 | REV A

SCALE NONE | SHEET 14 OF 16

834-0214 A


REVISIONS
ZONE LTR DESCRIPTION DATE APPROVED
74LS157 X2
ADR7
ADR6
ADR5
ADR4
ADR3
ADR2
ADR1
ADRØ
DAT 7
DAT 6
DAT 5
DAT 4
DAT 3
DAT 2
DAT 1
DAT Ø
TGTWR
TGTRD
74LS245
U57
U36 2114A
U17 2114A
74LS273
U16
74LS283
74LS139
74LS138
74LS161
74LS157 X2
74LS30
74LS00
74LS74
74LS20
74LS04
74LS08
74LS32
74LS273
U25
U146 93419
RP1 1KX8
U99 74LS04
U84
RD0 - RD7 SEE SHT 8
RD SEE SHT 8
U113 2564 ROM 6
U112 2564 ROM 5
U111 2564 ROM 4
U93 2564 ROM 10
U92 2564 ROM 9
U91 2564 ROM 8
U90 2564 ROM 7
U89 74LS373
U88 74LS373
U87 74LS373
U70 74LS299
U69 74LS299
U68 74LS299
U117 74LS374
U114 74LS374
U116 74LS373
U115 74LS377
74LS283 X3
74LS283X2
POS10
POS 9
POS 8
POS 7
POS 6
POS 5
POS 4
POS 3
POS 2
POS 1
POS Ø
FLIP
BEN
BCK
CREF3 SEE SH 8
LDP
LD7
834-0211 A
QTY REQD | CODE IDENT | PART OR IDENTIFYING NO. | NOMENCLATURE OR DESCRIPTION | ITEM NO.
PARTS LIST
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± DECIMALS .XX ± .XXX ± ANGLES ±
MATERIAL
FINISH
DO NOT SCALE DRAWING
NEXT ASSY USED ON
APPLICATION
CONTRACT NO.
APPROVALS DATE
DRAWN 4-6-82
CHECKED 4-8-82
MECH
ELEC
MFG
PROJECT
Gremlin/SEGA
San Diego, California 92123
IC Board B
SIZE D CODE IDENT NO. DRAWING NO. 834-0211 REV A
SCALE NONE SHEET 6 OF 9



REVISIONS		
ZONE	LTR	DESCRIPTION	DATE	APPROVED

QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	ITEM NO.

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:
FRACTIONS ± DECIMALS .XX ± .XXX ± ANGLES ±

MATERIAL

FINISH

CONTRACT NO.

APPROVALS	DATE
DRAWN *Wyman*	4-6-82
CHECKED *G GRICE*	4-8-82
MECH	
ELEC	
MFG	
PROJECT	

Gremlin/SEGA
San Diego, California 92123

IC Board B

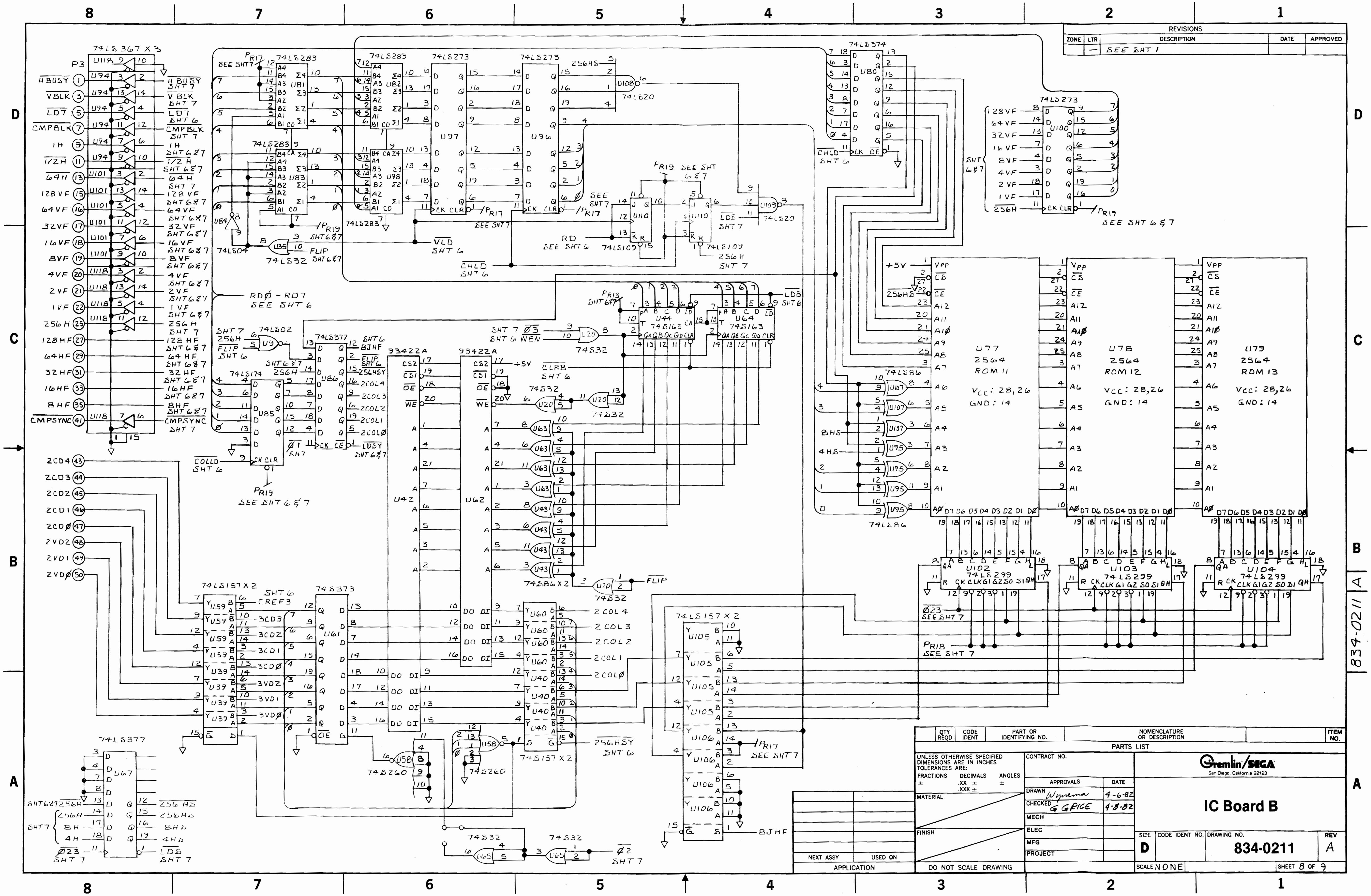
SIZE	CODE IDENT NO.	DRAWING NO.	REV
D		834-0211	A

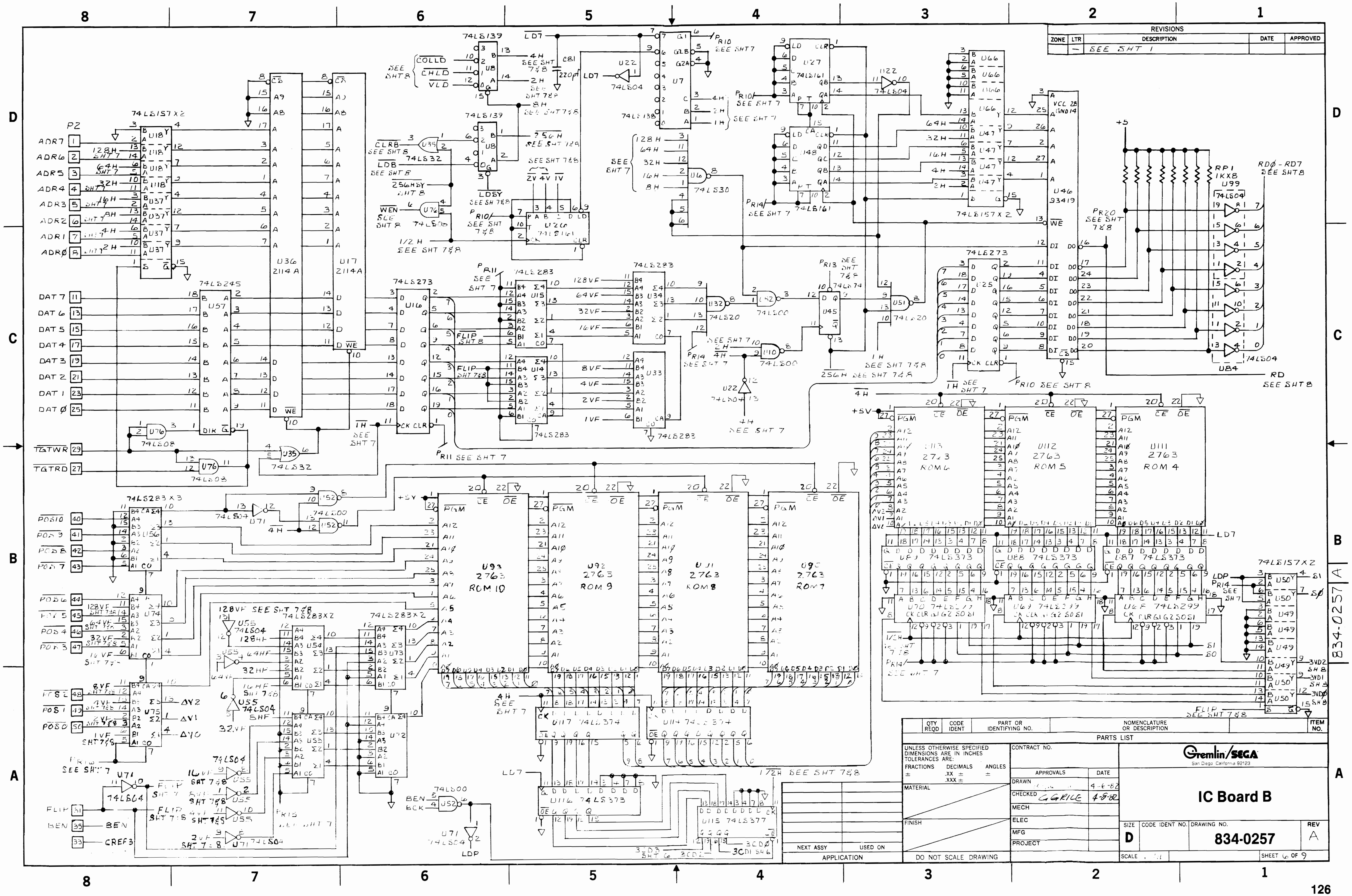
SCALE NONE SHEET 7 OF 9

NEXT ASSY | USED ON
APPLICATION

DO NOT SCALE DRAWING

834-0211 A


REVISIONS
ZONE LTR DESCRIPTION DATE APPROVED
— SEE SHT 1
74LS367 X 3
P3
H BUSY
VBLK
LD7
CMPBLK
1H
1/2H
64H
128VF
64VF
32VF
16VF
8VF
4VF
2VF
1VF
256H
128HF
64HF
32HF
16HF
8HF
CMPSYNC
2CD4
2CD3
2CD2
2CD1
2CDØ
2VD2
2VD1
2VDØ
74LS283
74LS273
74LS374
74LS04
74LS32
74LS20
74LS109
74LS02
74LS377
74LS174
93422A
74S163
74S32
74LS86
74S86 X 2
74LS157 X 2
74S373
74S260
74S157 X 2
74LS299
RD Ø - RD7 SEE SHT 6
U77 2564 ROM 11
U78 2564 ROM 12
U79 2564 ROM 13
VCC: 28,26 GND: 14
2 COL 4
2 COL 3
2 COL 2
2 COL 1
2 COL Ø
256HSY SHT 6
BJHF
Ø23 SEE SHT 7
PR18 SEE SHT 7
PR19 SEE SHT 6 & 7
PR17 SEE SHT 7
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:
FRACTIONS DECIMALS ANGLES
MATERIAL
FINISH
NEXT ASSY USED ON
APPLICATION
DO NOT SCALE DRAWING
CONTRACT NO.
APPROVALS DATE
DRAWN 4-6-82
CHECKED G GRICE 4-8-82
MECH
ELEC
MFG
PROJECT
QTY REQD CODE IDENT PART OR IDENTIFYING NO. NOMENCLATURE OR DESCRIPTION ITEM NO.
PARTS LIST
Gremlin/SEGA
San Diego, California 92123
IC Board B
SIZE D CODE IDENT NO. DRAWING NO. 834-0211 REV A
SCALE NONE SHEET 8 OF 9
834-0211 A



QTY REQD	CODE IDENT	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	ITEM NO.

PARTS LIST

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:
FRACTIONS ± DECIMALS .XX ± .XXX ± ANGLES ±

MATERIAL

FINISH

CONTRACT NO.

APPROVALS	DATE
DRAWN	4-6-82
CHECKED G GRILE	4-8-82
MECH	
ELEC	
MFG	
PROJECT	

Gremlin/SEGA
San Diego, California 92123

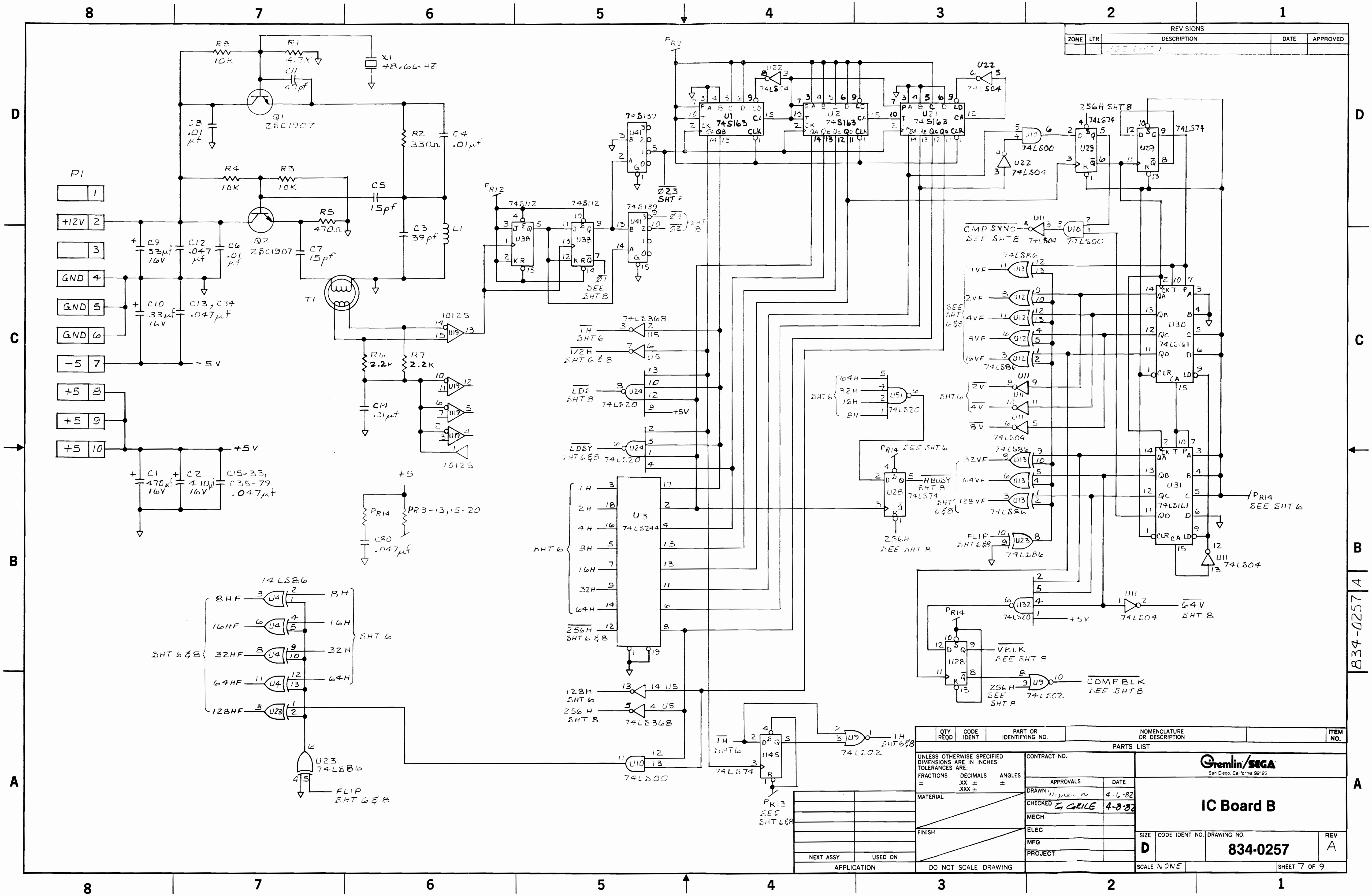
IC Board B

SIZE D | CODE IDENT NO. | DRAWING NO. 834-0257 | REV A

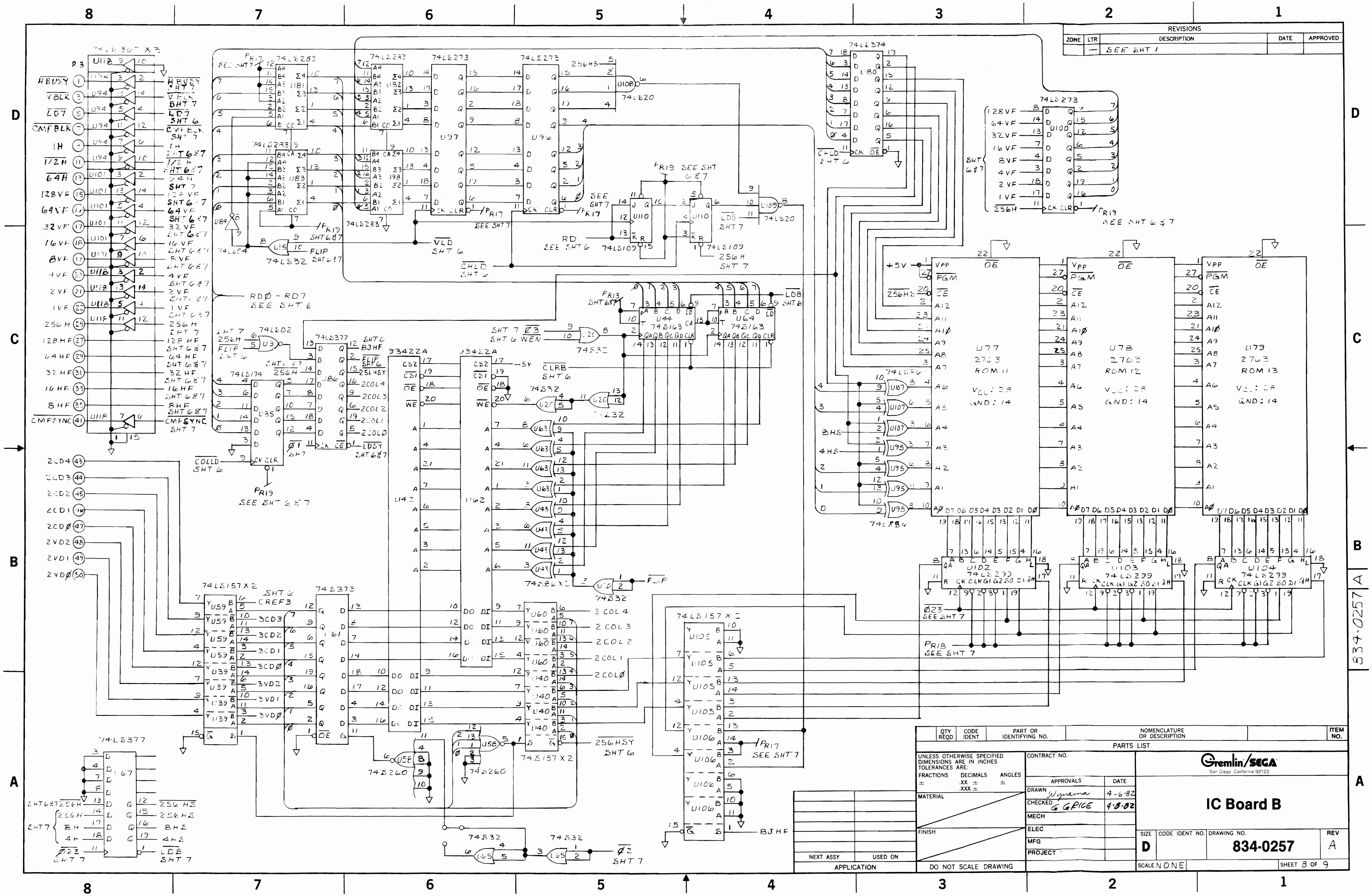
SCALE | SHEET 6 OF 9

NEXT ASSY | USED ON
APPLICATION

DO NOT SCALE DRAWING

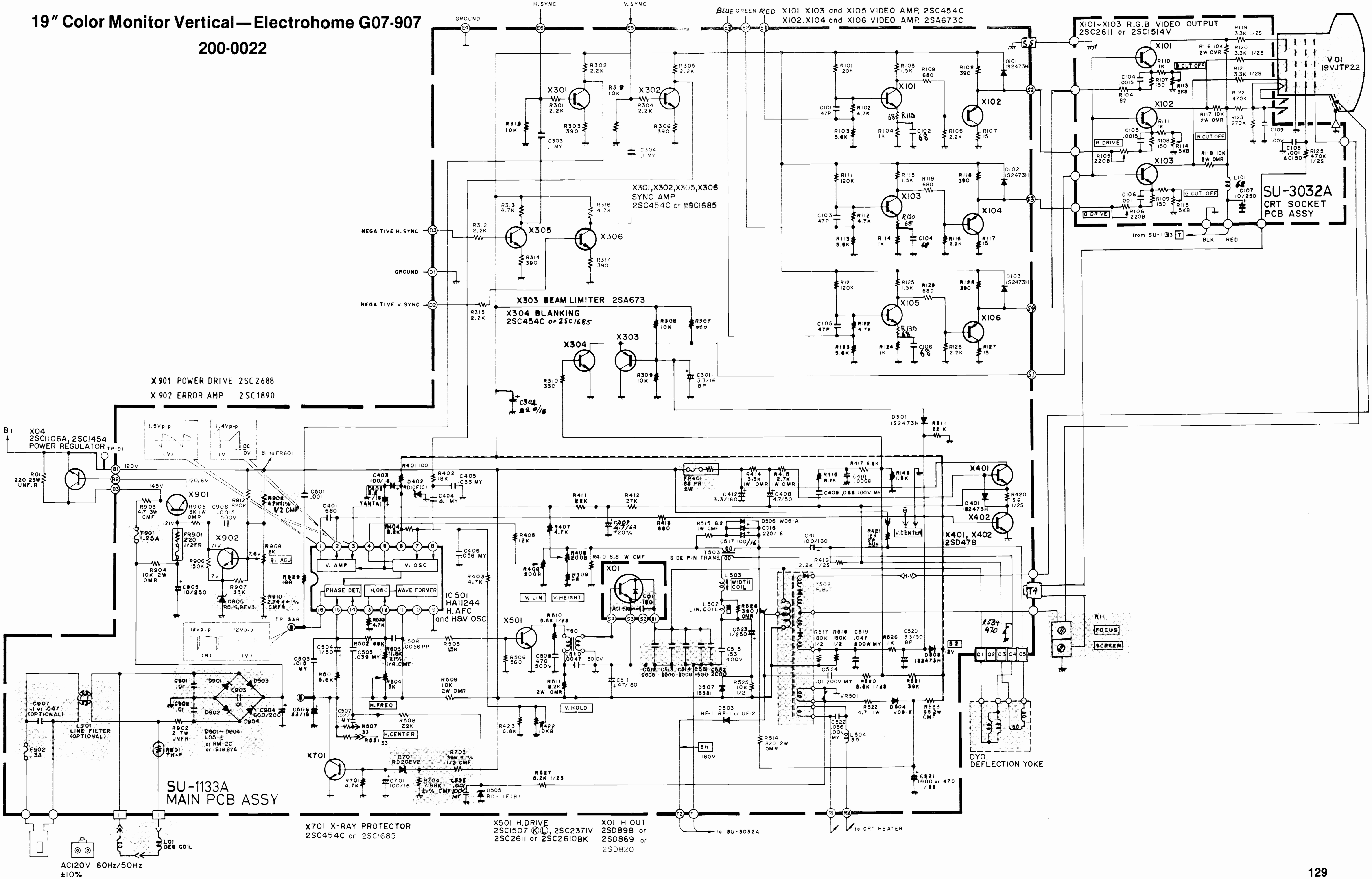


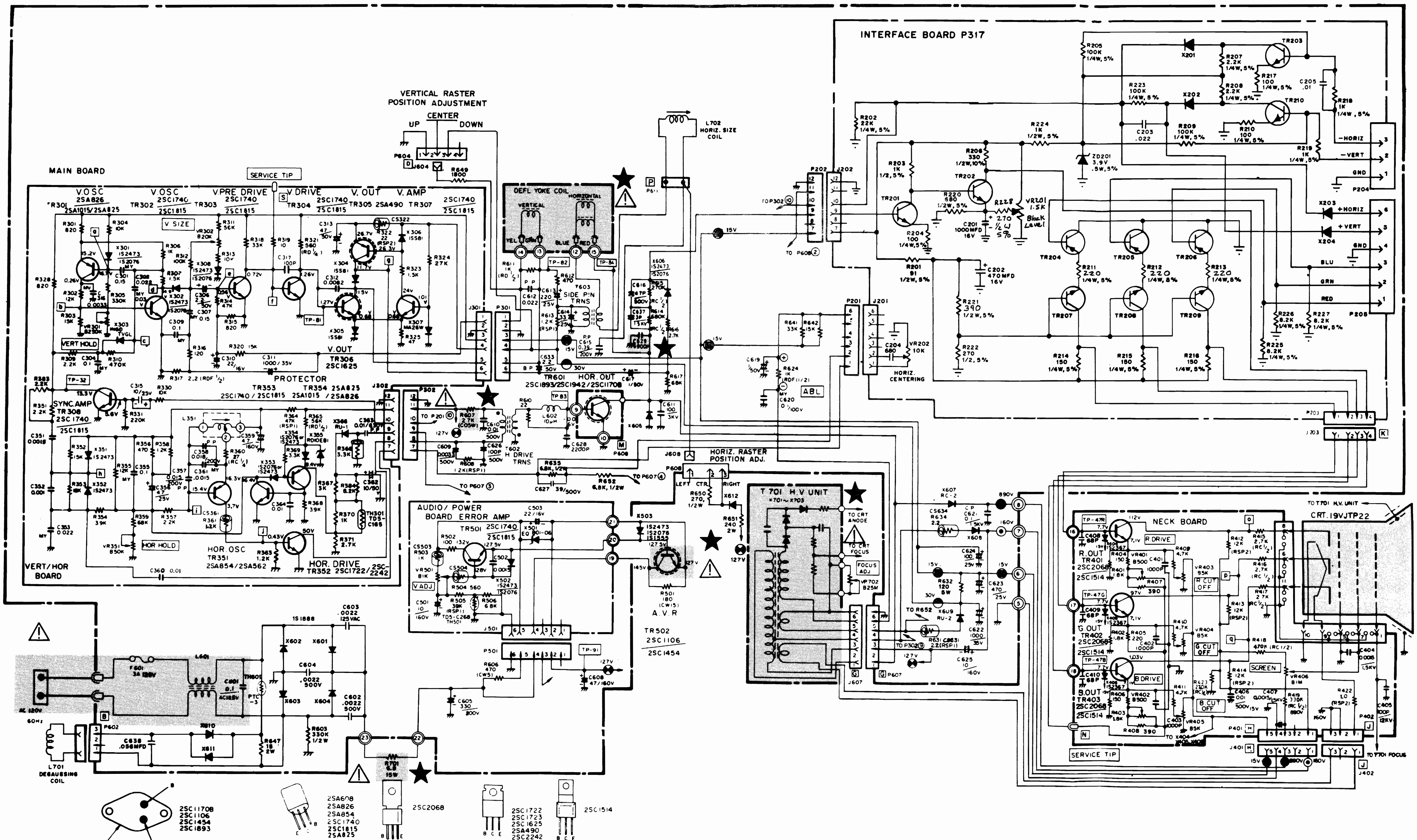
REVISIONS
ZONE LTR DESCRIPTION DATE APPROVED
P1
+12V
GND
-5
+5
-5V
+5V
U3 74LS244
U1 74S163
U2 74S163
U21 74S163
U30 74LS161
U31 74LS161
CMP SYNC SEE SHT 8
HBUSY SHT 8
VBLK SEE SHT 8
COMP BLK SEE SHT 8
FLIP SHT 6&8
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:
PARTS LIST
Gremlin/SEGA
San Diego, California 92123
IC Board B
SIZE D
DRAWING NO. 834-0257
REV A
SCALE NONE
SHEET 7 OF 9
DO NOT SCALE DRAWING
APPLICATION
NEXT ASSY USED ON
DRAWN 4-6-82
CHECKED G GRILE 4-8-82
834-0257 A


REVISIONS
ZONE LTR DESCRIPTION DATE APPROVED
— SEE SHT 1
74LS367 X 3
74LS283
74LS273
74LS374
74LS109
74LS377
74LS174
74LS157 X 2
74S373
93422A
74S163
74LS86
74LS279
U77 2763 ROM 11
U78 2763 ROM 12
U79 2763 ROM 13
VCC: 28
GND: 14
RD0 - RD7 SEE SHT 6
74S260
74S32
74S157 X 2
QTY REQD
CODE IDENT
PART OR IDENTIFYING NO.
NOMENCLATURE OR DESCRIPTION
ITEM NO.
PARTS LIST
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE:
FRACTIONS ±
DECIMALS .XX ± .XXX ±
ANGLES ±
CONTRACT NO.
APPROVALS DATE
DRAWN 4-6-82
CHECKED G GRICE 4-8-82
MATERIAL
MECH
ELEC
FINISH
MFG
PROJECT
NEXT ASSY
USED ON
APPLICATION
DO NOT SCALE DRAWING
Gremlin/SEGA
San Diego California 92123
IC Board B
SIZE D
CODE IDENT NO.
DRAWING NO. 834-0257
REV A
SCALE NONE
SHEET 8 OF 9
834-0257 A

19″ Color Monitor Vertical—Electrohome G07-907

200-0022





K4625C, K4626C, K4675C, K4676C-5816